Appendix L. Conceptual Cost Estimates

Alternatives Analysis Cost Methodology and Assumptions

The construction costs estimates based on the conceptual design presented in this appendix are order-of magnitude cost comparisons of the different design options and do not represent total costs for the project. The conceptual cost estimates are based on the various vertical options shown in Appendix B and the unit prices from the 2009 Business Plan. The cost for ROW is identified qualitatively (high, medium, or low); estimated ROW needs and costs are being developed for options in the 15% engineering design effort.

Basis of Estimate

These estimates have been prepared based on the following:

- Unit costs from 2009 business plan (2009 dollars)
- Preliminary profiles shown on the 500-scale plans included as Appendix B
- Costs broken down by major Subsections 0-9, and then by sub-subsections as depicted on the 500-scale plans
- Costs have been developed for the following options:
 - Aerial Viaduct
 - o Berm (Embankment or MSE mechanically stabilized earth)
 - o At-Grade
 - o Open Trench
 - o Covered Trench/Tunnel
 - Deep Tunnel
- ROW costs identified qualitatively as Low, Medium or High
- System wide elements such as Traction Power, Overhead Contact System, Communications, Signaling assumed to be equal for all options
- Costs for reconfiguration of existing Caltrain stations included
- 4-track fully grade separated shared use system assumed
- Costs for HST stations at Millbrae and San Jose included
- Costs for potential Mid-Peninsula HST station not included
- Maintenance facility not included
- Temporary construction easements (TCE) not included
- Contingency of 25% is included

Definitions/Assumptions

- Aerial Viaduct Elevated structure on columns crossing over existing streets to provide grade separated access.
- Berm Earthen elevated berm with slopes conforming back to surrounding grade, or mechanically stabilized earth (MSE) walls. Grade separation accomplished by structures spanning the roadways.
- At-Grade Grade separations requiring streets to go either over or under tracks that remain at existing
 Caltrain grade. ROW impacts account for parcels affected by changes to the roadway profile approaching the
 grade separation.
- Open Trench Shallow open box bridged at street crossings and drainage channels or streams. These bridged areas would be approximately 10 feet deep in order to accommodate existing utilities.

- Covered Trench/Tunnel Shallow covered box generally constructed from the surface down. Fire and life safety systems required. Top of the box approximately 10 feet below existing street level to minimize impacts to existing underground utilities.
- Deep Tunnel Deep tunnel generally constructed by mining or tunnel boring machine (TBM). Large surface
 areas needed at the tunnel portals to facilitate construction. Fire and life safety systems required. No HST or
 Caltrain stations. Option only considered for 2 HST tracks, therefore to develop total cost must add cost to
 reconstruct Caltrain tracks to achieve the required grade separations. Deep tunnel unit cost is based on
 construction methodology; soil conditions will dictate actual types of construction.

The use of a vertical option in any given sub-section must be coordinated with the adjacent subsection. Transitions between vertical solutions require approximately 3,000 feet of horizontal distance; the final selected solution must be one that can be "stitched" together without excessive vertical alignment changes. The cost tables are broken down into subsections for options that cover the predominant portion of the subsection. Costs of transitions between vertical options are included within major option types. It is assumed that 4 tracks will be utilized for the entire corridor; to develop total costs for "split" solutions where HST tracks are at one level and Caltrain tracks are at another level requires adding the costs of the options to total 4 tracks. There are notes to that effect in each of the design options where this is a possibility.

These conceptual-level costs are intended to allow a comparative analysis within each subsection between the numerous vertical options that continue to be studied; a more detailed estimate will be developed with the 15% engineering design.



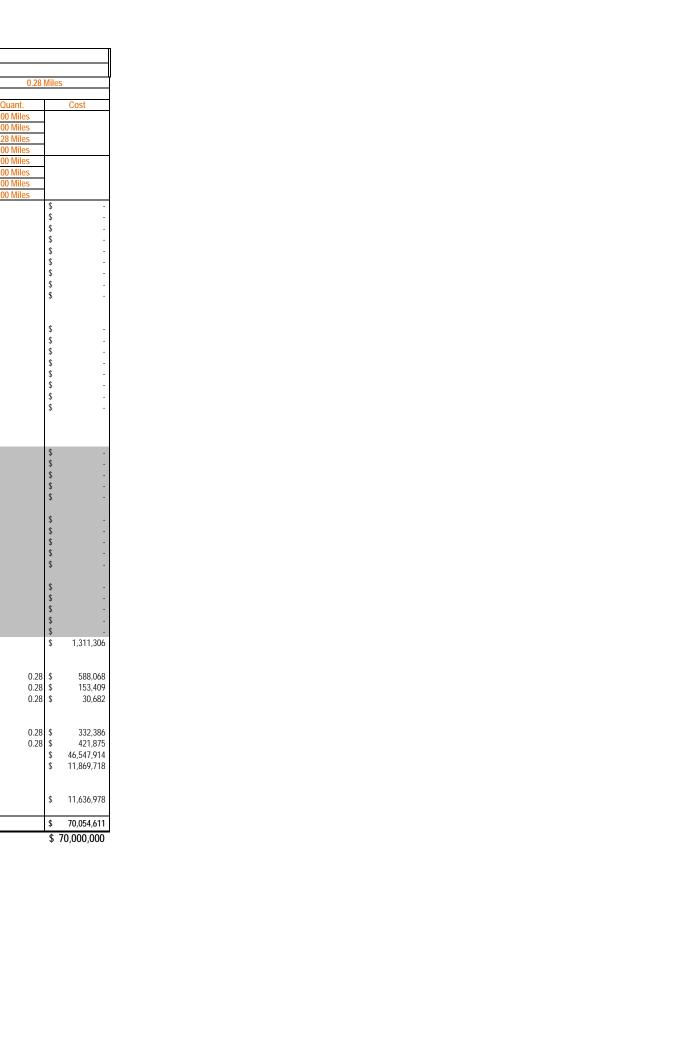
	0A (2.2 miles)	0B (2.2 miles)	0C (1.0 miles)	0D (2.3 miles)
Subsection 0	Covered Trench/ Tunnel	Covered Trench/Tunnel	At Grade	Covered Trench/ Tunnel
Capital Cost (in Millions) does not include ROW	\$3,000 (\$YOE) (Estimate provided by the TJPA, 2010)	\$3,000 (\$YOE) (Estimate provided by the TJPA, 2010)	\$200 (\$YOE)	\$3,000+ (\$YOE)
Acquisition Cost of Permanent ROW	Medium	Medium	Lowest	Highest
Notes:	1. Inclusive of train box and station (in year of expenditure \$) 2. Includes \$100M for reconstruction of 4th & King. 3. Assumed CHSRA contribution of \$1B from CHSRA 2009 Business Plan.	Assumed HST contribution of \$1B towards the total construction costs.	1. Based on MTC SF/Silicon Investment Strategy dated June 2009. 2. Assumed costs to be doubled that of the 2 platform option.	1. Inclusive of train box and station (in year of expenditure \$) 2. Includes \$100M for reconstruction of 4th & King. 3. \$3 billion cost based on TTC estimate for 2.2 mile tunnel and terminal.

	1A (0.3	s miles)	1B & 1C((1.0 miles)	1D, 1E, 1F & ⁻	1G (3.5 miles)
Subsection 1	At Grade	Covered Trench/ Tunnel	At Grade	Covered Trench/ Tunnel	At Grade	Covered Trench/ Tunnel
Capital Cost (\$2009 in Millions) does not include ROW	\$44 (2 tracks)	\$70 (2 tracks)	\$21 (2 tracks)		\$458 (4 tracks); \$71 (2 tracks)	\$978 (2 tracks)
Acquisition Cost of Permanent ROW	Lowest	Medium	Lowest	Lowest	Highest	Lowest
Notes:	2 tracks - 1. Grade separations at Common St and 16th St; 2. ROW take considers the parcels impacted by new grade separations; 3. Two tracks on existing Caltrain alignment for approach to 4th/King station. Must be combined with 2 track covered trench/tunnel option.	2 tracks - 1. Two tracks on new alignment for approach to TTC; Must be combined with 2 track at grade option. 2. Alignment under 7th St.	2 tracks - 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. Must be combined with 2 track covered trench/tunnel option.	Must be combined with 2 track at grade option.	4 tracks - 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. 2. Two tracks on new alignment for approach to TTC using combination of tunneling and aerial structures. 3. Caltrain Bayshore Station. 2 tracks - 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. Must be combined with 2 track covered trench/tunnel option. 2. Caltrain Bayshore Station.	2 tracks - 1. Drilled & blast tunneling method; 2. Two tracks on new alignment for approach to TTC. Must be combined with 2 track at grade option.

COST ELEMENTS	UNIT	UNI	T PRICE		At-G	Grade		Tunnel				
Subsection 1		Base:	2009 (3rd	01		Α	111 -	O1 000 00		A	1	
			uarter)	Start: 200 + 00	End: 215 + 00	0.28 N	liles	Start: 200 + 00	End: 215 + 00	0.28 Mi	les	
Subsection Details Double Track At Crede (Mile)		•		Start- 200 00	End: 215 + 00	Quant.	Cost	Ctowt. 0 00	End: 0 : 00	Quant.	Cost	
Double Track At-Grade (Mile) Double Track Elevated (Mile)				Start: 200 + 00 Start: 0 + 00	E110: 215 + 00	0.28 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 200 + 00	End: 215 + 00	0.28 Miles		
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00	Liid. U F UU	0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile) Four Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Double Track Section - Total				Jiai i. V + VV				Jiai i. V † VV				
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.28				0.00		
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ \$	4,700,160 4,700,160			0.00 0.00				0.00 \$ 0.28 \$		
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00				0.00		
Four Track Section - Total												
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00 \$	-	
Four-Track Section - On Structure	Mile	\$	9,400,320			-	\$ -			0 \$		
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ \$	9,400,320 9,400,320			-	\$ - \$ -			0.00 \$		
	1		,									
Single Track - Total 5 Single Track Section - At Grade	Mile	\$	1,549,312			n	\$ -			0 \$	-	
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0 \$	-	
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ \$	2,350,080 2,350,080				\$ - \$ -			0 \$		
o Single track Section in Hench	IVIIIC	y .	2,330,000			o l	.					
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ \$	2,839,552 1,549,312			-	\$ - \$ -			0 \$		
To Freight Single Track - At Grade	iville	\$	1,549,312			U	\$ -			0 3		
Earthwork Items	1.		0.55									
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$	9,216 6			3.79 0.00				3.79 \$ 96800.00 \$		
3 Total Fill	CY	\$	6			0.00				38720.00 \$	243,546	
4 Borrow 5 Spoil	CY CY	\$ \$	13 13				\$ - \$ -			0.00 \$ 58080.00 \$		
6 Landscape erosion Control	Acre	\$	6,144				\$ 553			1.20		
7 Security Fencing (Both sides of ROW)	Mile	\$ thwork	144,384				\$ - \$ 1772			\$	- 00.047	
8 Special Drainage Facilities	5% Ear	u IWOFK					\$ 1,773			\$	82,047	
Structures, Tunnels, Walls	ļ,		04.670 :=:				•					
1 Standard Structure 2 High Structure	Mile Mile	\$ \$	34,972,672 40,424,448				\$ - \$ -			0.00	- -	
3 Long Span Structure	Mile	\$	61,919,232				\$ -			9	-	
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ \$	85,342,208 92,049,408				\$ - \$ -			0.00	-	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -			0.00		
7 Twin Single Track TBM (<6 Miles)	Mile Mile		106,637,312				\$ - \$ -			\$	-	
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile		176,720,896 146,887,680				\$ - \$ -			0.00		
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -			9	-	
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile		106,637,312 176,720,896				\$ - \$ -			3	- -	
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -			\$	-	
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ \$	442,368 131,246,080				\$ - \$ -			0.28	- 37,285,818	
14 Trench Short	Mile	\$	78,843,904			0.00	\$ -			0.00		
15 Trench Long 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ \$	57,524,224 11,848,704				\$ - \$ -			0.28	3,366,109	
17 Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0.00 \$	-	
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$	5,907,456			0.00	\$ -			0.00	-	
Four Track Drill & Blast	Mile		131,246,080 293,775,360				\$ -			3	· -	
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -			\$	-	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile		213,274,624 353,441,792				\$ - \$ -			\$		
Four Track Cut & Cover Tunnel	Mile		262,492,160			0.00	*			9	-	
Grade Separations												
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			2	\$ 26,568,704			9		
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -			\$		
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ \$	2,759,680 2,029,568				\$ - \$ -			9		
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$ -			0 \$	-	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ \$	3,593,216 2,850,816				\$ - \$ -			0 9		
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -			0 3		
7 Street Bridging HSR Trench	ea	\$	1,398,784				\$ -			9		
8 Minor Crossing Closures	ea	\$	87,040				\$ -			\$		
Building Items												
, ,	•	•		•	. '			•		Į.		

COST ELEMENTS	UNIT	l	JNIT PRICE		At-C	Grade			Tui	nnel		
Subsection 1		Ba	se: 2009 (3rd			A			1	A		
			Quarter)	Start: 200 + 00	End: 215 + 00	0.28	Miles	Start: 200 + 00	End: 215 + 00	0.281	Miles	
Subsection Details						Quant.	Cost		1	Quant.		Cost
Double Track At-Grade (Mile)				Start: 200 + 00	End: 215 + 00	0.28 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles		0031
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 200 + 00	End: 215 + 00	0.28 Miles		
Double Track Trench (Mile)				Start: 0 + 00	- L 0 00	0.00 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	Liid. 0 + 00	0.00 Miles		
1 Intermediate Passenger Stations	Each	\$	-	Otal trovios		0.00 1111100	\$ -	otarti o i oo		0.00 1100	\$	-
2 Terminal Passenger Stations	Each	\$	-				\$ -				\$	-
Caltrain Passenger Station - At-Grade	Each		\$15,000,000				\$ -				\$	-
Caltrain Passenger Station - On Structure	Each		\$15,000,000				\$ -				\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each		\$15,000,000				-				\$	-
Caltrain Passenger Station - In Trench	Each		\$15,000,000				\$ -				\$	-
3 Maintenance Facility			123,921,884				\$ -				\$	-
4 Parking - Structures 5 Parking - At Grade	space space		-				ф •				\$ \$	-
Sir diking 'At Orduc	space	Ψ	-				-				Ψ	-
Rail & Utility Relocation												
1 Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$	-
2 Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$	-
3 Single Track Removal	Mile	\$	130,048				\$ -				\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$	-
5 Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$	-
7 Major Utility Relocations - Suburban	Mile Mile	\$	464,896				\$ -				\$ \$	-
8 Major Utility Relocations - Undeveloped	IVIIIe	\$	30,720				\$ -				\$	-
ROW (NOT INCLUDED)												
ROW required for each segment												
1 Dense Urban	Acre	\$	2,786,321				\$ -				\$	-
2 Urban	Acre	\$	1,371,510				\$ -				\$	-
3 Dense Suburban	Acre	\$	908,134				\$ -				\$	-
4 Suburban	Acre	\$	208,418				\$ -				\$	-
5 Undeveloped	Acre	\$	3,642				-				\$	-
ROW required for Temp. Construction Easement							•					
1 Dense Urban 2 Urban	Acre Acre						\$ -				\$	-
3 Dense Suburban	Acre						\$ -				\$	-
4 Suburban	Acre						\$				\$	
5 Undeveloped	Acre						\$ -				\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities							Ť					
6 Dense Urban	Acre	\$	2,786,321				\$ -				\$	-
7 Urban	Acre	\$	1,371,510				\$ -				\$	-
8 Dense Suburban	Acre	\$	908,134				-				\$	-
9 Suburban	Acre	\$	208,418				-				\$	
10 Undeveloped	Acre	\$	3,642				\$ 816,078				\$	1 211 20/
Environmental Mitigation = 3% Line Costs							φ 010,078				Ф	1,311,306
System Elements												
1 Signaling (ATC)	Mile	\$	2,070,000			0.28	\$ 588,068			0.28	\$	588,068
2 Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.28			j	0.28		153,409
3 Wayside Protection System	Mile	\$	108,000			0.28	\$ 30,682		j	0.28	\$	30,682
									j			
Electrification Items		_	4 470 000				¢ 200.00:			2.5-		000.00
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ \$	1,170,000			0.28 0.28				0.28		332,386
2 Traction Power Distribution Subto		Þ	1,485,000			U.28	\$ 421,875 \$ 29,545,092			0.28	\$	421,875 46,547,914
Program Implementation Costs (per screening)	ui						\$ 7,533,998				\$	11,869,718
Program Implementation Costs Program Implementation Costs							,000,770		j		*	, 50 , , , 10
Contingencies (per screening) (25%)							\$ 7,386,273				\$	11,636,978
		<u> </u>							<u> </u>			
Subtotal							\$ 44,465,363				\$	70,054,611
Subtotal Rounded							\$ 44 000 000				φ 7	0.000 000

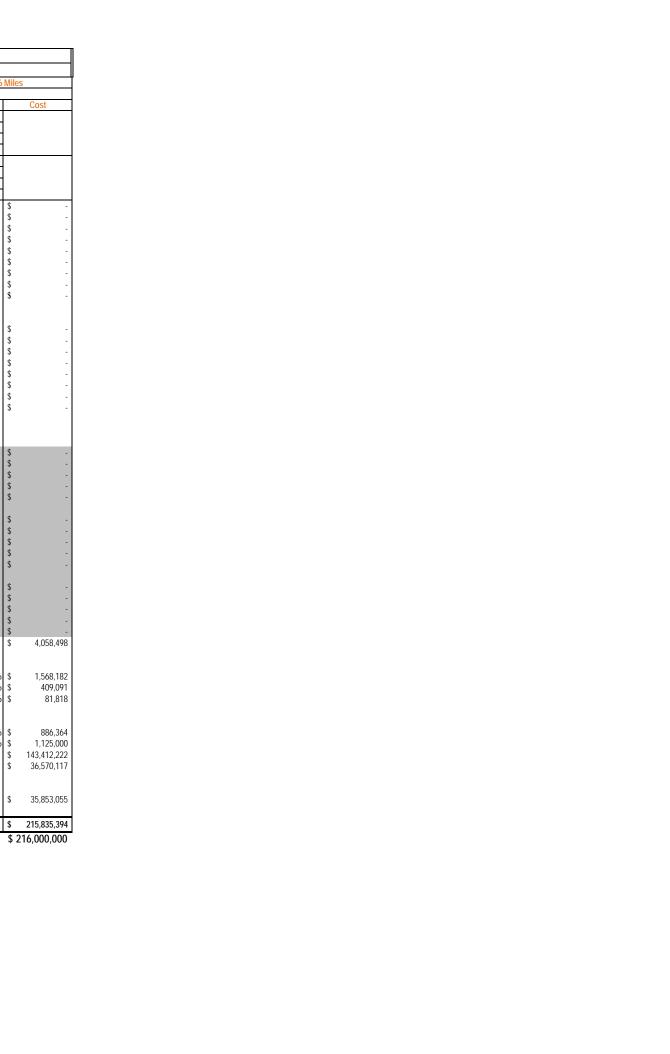
Subtotal Rounded \$ 44,000,000 \$ 70,000,000



COST ELEMENTS	UNIT	UNIT PRICE			irade				innel	
ubsection 1		Base: 2009	Start: 215 + 00	End: 255 + 00	B 0.761	Miles	Start: 215 + 00	End: 255 + 00	B 0.76 M	liles
		(3rd Quarter)	Start. 210 ± 00	E110. 200 + 00	0.70	wiilea	Start. 210 ± 00	Liiu. 200 + 00	U.76 IV	mic3
ubsection Details					Quant.	Cost			Quant.	Cost
ouble Track At-Grade (Mile)			Start: 215 + 00	End: 255 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
ouble Track Elevated (Mile) ouble Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 215 + 00	End: 255 + 00	0.00 Miles 0.76 Miles	
ouble Track Translet (Wile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	L11u. 255 + 00	0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Trench (Mile)	1		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.76	\$ 1,591,079			0.00	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00				0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00				0.76	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00	
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	¢.			0.00	
Four-Track Section - At Grade Four-Track Section - On Structure	Mile	\$ 4,200,448 \$ 9,400,320				\$ -			0.00	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320				\$ -			0.00	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$ -			0.00	
Single Track - Total	A 417	A 540.045				.				
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312				\$ - \$ -			0.00 \$	
7 Single Track Section - On Structure	Mile	\$ 2,350,080 \$ 2,350,080				\$ -			0.00 3	
8 Single Track Section - In Turner of Subway	Mile	\$ 2,350,080				\$ -			0.00	
3		, , , , , , , , , , , , , , , , , , , ,								
9 Freight Double Track - At Grade	Mile	\$ 2,839,552				\$ -			0.00	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0.00	-
Earthwork Items										
1 Site Preparation - Undeveloped	Acre	\$ 9,216			10.10	\$ 93,091			10.10	93,091
2 Total Cut	CY	\$ 6			0.00				652666.00	
3 Total Fill	CY	\$ 6			261066.00				261066.00	
4 Borrow	CY	\$ 13			261066.00				0.00	
5 Spoil	CY	\$ 13			0.00				391600.00	
6 Landscape erosion Control 7 Security Foreign (Path sides of POW)	Acre Mile	\$ 6,144 \$ 144,384			0.09				8.09	
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Ear				0.76	\$ 109,382 \$ 256,464			0.00	
opposition Diamage i asimues	J/0 Edl	UIWOIK				Ψ ∠30,404				, 540,081
Structures, Tunnels, Walls										
1 Standard Structure	Mile	\$ 34,972,672			0.00	\$ -			0.00	-
2 High Structure	Mile	\$ 40,424,448				-				-
3 Long Span Structure	Mile Mile	\$ 61,919,232				\$ -				· -
Waterway Crossing - Primary Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 85,342,208 \$ 92,049,408			0.00	\$ -				· ·
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			0.00	\$ -				-
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			3	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$ -			\$	-
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	-			0.76	111,278,545
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile	\$ 79,200,000				\$ -			3	-
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896				\$ -]	
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,890				\$ -				,
12 Crossovers	ea	\$ 442,368				\$ -				-
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00				0.00	-
4 Trench Short	Mile	\$ 78,843,904			0.00	-				-
15 Trench Long	Mile	\$ 57,524,224				\$ -			0.7/	0 07/ 201
16 Mechanical & Electrical for Tunnels 17 Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			0.00	\$			0.76	8,976,291
18 Containment Walls	Mile	\$ 5,907,456			0.00					, ·
9 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			5.50	\$ -				
Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -				-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				-]	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				\$ -]	
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	\$ \$;
. Sa. Taok Sar a Sover Familier	WIIIC	Ψ 202, 772, 100			0.00	_] '	,
Grade Separations]	
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			1	;
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				-				
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -				· ·
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520			n	\$ -				
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			U	\$ -				,
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			0	\$ -				
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328			Ŭ	\$ -				;
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -				
8 Minor Crossing Closures	ea	\$ 87,040				\$ -			1	· -

COST ELEMENTS	UNIT	UNIT PRICE		At-0	Grade			Tu	nnel	
Subsection 1		Base: 2009			В				В	
		(3rd Quarter)	Start: 215 + 00	End: 255 + 00	0.76	Miles	Start: 215 + 00	End: 255 + 00	0.76	Miles
Subsection Details					Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 215 + 00	End: 255 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	E 1.0EE 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 215 + 00 Start: 0 + 00	End: 255 + 00	0.76 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) 1 Intermediate Passenger Stations	Each	\$ -	Start: 0 + 00		0.00 Miles	\$ -	Start: 0 + 00		0.00 Miles	\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				-
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884				\$ - \$ -				\$ - \$ -
4 Parking - Structures	space	\$ 123,721,004				\$ -				\$ -
5 Parking - At Grade	space	*				\$ -				\$ -
	•									
Rail & Utility Relocation		* 0.000.004				•				•
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896				\$ - \$ -				\$ - \$ -
3 Single Track Removal	Mile	\$ 2,000,898				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				-
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile	\$ 464,896 \$ 30,720				\$ - \$ -				\$ - \$ -
8 Iviajui Otility Relocations - Orideveloped	wille	\$ 30,720				\$ -				5 -
ROW (NOT INCLUDED)										
ROW required for each segment										
1 Dense Urban	Acre	\$ 2,786,321				-				-
2 Urban 3 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				-				\$ -
4 Suburban	Acre	\$ 908,134				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -
ROW required for Temp. Construction Easement										
1 Dense Urban	Acre					\$ -				-
2 Urban 3 Dense Suburban	Acre Acre					\$ -				-
4 Suburban	Acre					\$ -				\$ -
5 Undeveloped	Acre					\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities										
6 Dense Urban	Acre	\$ 2,786,321				-				-
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -
Environmental Mitigation = 3% Line Costs						\$ 209,305				\$ 4,058,498
System Elements										
1 Signaling (ATC)	Mile	\$ 2,070,000			0.76	\$ 1,568,182			0.76	\$ 1,568,182
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.76				0.76	
3 Wayside Protection System	Mile	\$ 108,000			0.76				0.76	
Electrification Items 1 Traction Power supply	Mile	¢ 1 170 000			0.76	\$ 004.274			0.76	¢ 004.27.4
2 Traction Power Supply	Mile	\$ 1,170,000 \$ 1,485,000			0.76 0.76				0.76	
Subtotal		, ,,,,,,,,,,,			5.70	\$ 11,256,580			5.76	\$ 143,412,222
Program Implementation Costs (per screening)						\$ 2,870,428				\$ 36,570,117
Program Implementation Costs										
Contingencies (per screening) (25%)						\$ 2,814,145				\$ 35,853,055
Contingencies (per screening) (2370)						Ψ 2,014,140				Ψ 55,055,055
Subtotal		•		1		\$ 16,941,153				\$ 215,835,394
Subtotal (Rounded)						\$ 17,000,000	l .			\$ 216,000,000

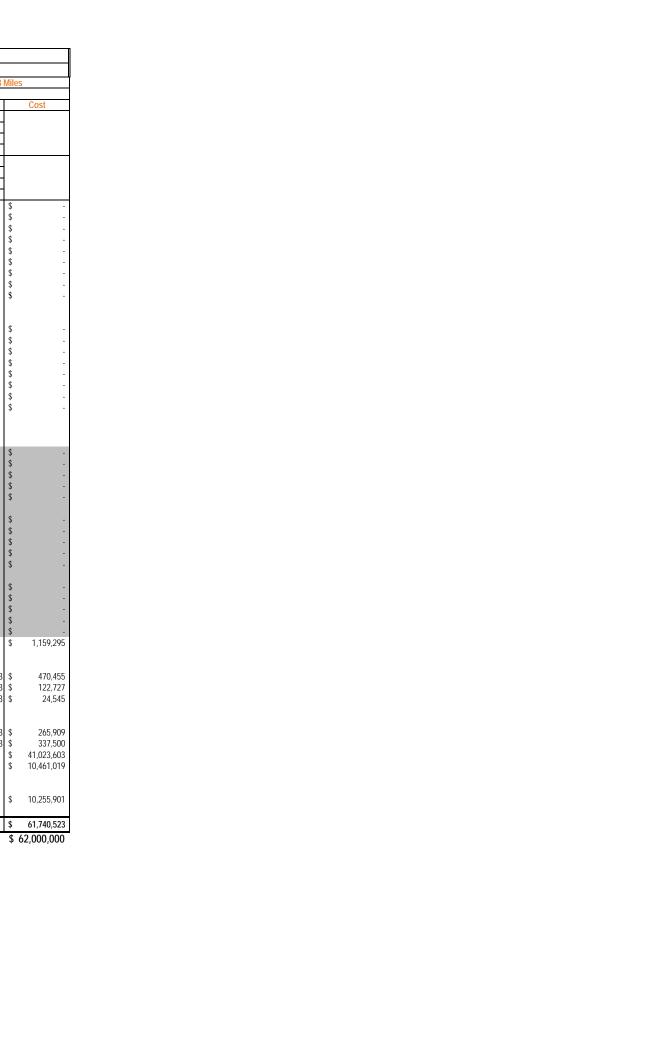
Subtotal (Rounded) \$ 17,000,000 \$ 216,000,000



COST ELEMENTS	UNIT	UNIT PRICE			Grade				nnel	
ubsection 1		Base: 2009	Start: 255 + 00	End: 267 + 00	0.23 l	Miles	Start: 255 + 00	End: 267 + 00	C 0.23 Mi	iles
		(3rd Quarter)	Start: 255 + 00	End: 207 + 00	0.23	villes	Start: 255 + 00	End: 207 + 00	U.23 IVII	lies
ubsection Details					Quant.	Cost			Quant.	Cost
ouble Track At-Grade (Mile)			Start: 255 + 00	End: 267 + 00	0.23 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
ouble Track Elevated (Mile)			Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	End: 2/7 : 00	0.00 Miles	
ouble Track Tunnel (Mile) ouble Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 255 + 00 Start: 0 + 00	End: 267 + 00	0.23 Miles 0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00	Liid. 0 + 00	0.00 Miles		Start: 0 + 00	Liiu. 0 + 00	0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total										
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.23				0.00 \$	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00				0.00 \$	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00				0.23 \$	
4 Double Hack Section - III Hench	IVIIIC	\$ 4,700,100			0.00	.			0.00 1)
Four Track Section - Total										
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	\$ -			0.00 \$	3
Four-Track Section - On Structure	Mile	\$ 9,400,320			0				0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0				0.00 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$ -			0.00 \$	3
Single Track - Total				[
5 Single Track Section - At Grade	Mile	\$ 1,549,312		[n	\$ -			0.00 \$	5
6 Single Track Section - On structure	Mile	\$ 2,350,080				\$ -			0.00 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080				\$ -			0.00 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080		[\$ -			0.00 \$	
				[
9 Freight Double Track - At Grade	Mile Mile	\$ 2,839,552		[0	\$ - \$ -			0.00 \$	
10 Freight Single Track - At Grade	iville	\$ 1,549,312			U	\$ -			0.00 \$	•
Earthwork Items										
1 Site Preparation - Undeveloped	Acre	\$ 9,216			3.03	\$ 27,927			3.03 \$	27,92
2 Total Cut	CY	\$ 6			0.00				84333.00 \$	
3 Total Fill	CY	\$ 6			33733.00				33733.00 \$	212,17
4 Borrow	CY	\$ 13			33733.00	\$ 424,356			0.00 \$	
5 Spoil	CY	\$ 13			0.00				50600.00 \$	
6 Landscape erosion Control	Acre	\$ 6,144			0.09				1.05 \$	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.23				0.00 \$	
8 Special Drainage Facilities	5% Ear	IIIWOIK				\$ 34,891			1	71,35
Structures, Tunnels, Walls										
1 Standard Structure	Mile	\$ 34,972,672			0.00	\$ -			0.00 \$	3
2 High Structure	Mile	\$ 40,424,448				\$ -			\$	5
3 Long Span Structure	Mile	\$ 61,919,232				\$ -			\$	5
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -			\$	5
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.00	\$ -				
6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 142,731,264				\$ -			3	
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312 \$ 176,720,896				\$ -			3	
9 Double Track Drill & Blast	Mile	\$ 176,720,690			0.00	\$ -			0.23	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	\$ -			3.20	5
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -				
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				\$ -				
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$ -			\$	5
12 Crossovers	ea	\$ 442,368		[2.5-	-			\$	3
13 Cut & Cover Double Track Tunnel 14 Trench Short	Mile Mile	\$ 131,246,080 \$ 78,843,904			0.00 0.00				0.00) :
14 Trench Short 15 Trench Long	Mile	\$ 78,843,904			0.00	\$ -			3	,
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$ -			0.23	5 2,692,88
17 Retaining Walls	Mile	\$ 8,613,888			0.00	\$ -			9.23	. 2,072,00
18 Containment Walls	Mile	\$ 5,907,456			0.00					3
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$ -			\$	3
Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -			\$	5
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				-				
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				\$ -				
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	\$ -				,
TOUR TRACK OUT & COVER TUILIER	iville	ψ ∠UZ,47Z,10U			0.00	-] 3	,
Grade Separations				[
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			\$	5
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -			\$	3
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -			\$	5
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -			\$	3
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			0	\$ -			\$	5
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -			\$	5
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			0	\$ -				
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -				·
7 Street Bridging HSR Trench	ea	\$ 1,398,784 \$ 87.040				\$ - \$ -			\$) :
8 Minor Crossing Closures	ea	\$ 87,040				φ -]			

COST ELEMENTS	UNIT	UNIT PRICE		At-C	Grade			Tur	nnel	
Subsection 1		Base: 2009	Start: 255 + 00	End: 267 + 00	C 0.23 I	Miles	Start: 255 + 00		C 0.221	Mileo
		(3rd Quarter)	Start: 255 + 00	End: 267 + 00	0.231	VIIIeS	Start: 255 + 00	End: 267 + 00	0.23	villes
Subsection Details			CL 1 0FF 00	E 10/7 00	Quant.	Cost		F 1 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 255 + 00 Start: 0 + 00	End: 267 + 00	0.23 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 255 + 00	End: 267 + 00	0.23 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -				\$ - \$ -				\$
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade	Each Each	\$ - \$15,000,000				\$ -				\$
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ - \$ -				\$
3 Maintenance Facility 4 Parking - Structures	Each space	\$ 123,921,884 \$ -				\$ -				\$
5 Parking - At Grade	space	\$ -				\$ -				\$
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mila	¢ 2,000,007				¢				¢
2 Single Track Relocation (Temporary)	Mile Mile	\$ 2,000,896 \$ 2,000,896				\$ - \$ -				\$
3 Single Track Removal		\$ 130,048				\$ -				\$
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896				\$ - \$ -				\$
8 Major Utility Relocations - Subdiban	Mile	\$ 404,890				\$ -				\$
ROW (NOT INCLUDED)										
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$
2 Urban		\$ 1,371,510				\$ -				\$
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$
4 Suburban	Acre	\$ 208,418				\$ -				\$
5 Undeveloped ROW required for Temp. Construction Easement	Acre	\$ 3,642				\$ -				\$
1 Dense Urban	Acre					\$ -				\$
2 Urban	Acre					\$ -				\$
3 Dense Suburban	Acre					\$ -				\$
4 Suburban 5 Undeveloped	Acre Acre									\$
Right-of-Way Required for Stations, Maintenance & Parking Facilities	ACIE					-				φ
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$
7 Urban		\$ 1,371,510				\$ -				\$
8 Dense Suburban 9 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ -				\$
10 Undeveloped	Acre	\$ 3,642				\$ -				\$
Environmental Mitigation = 3% Line Costs						\$ 36,301				\$ 1,159,295
System Flaments										
System Elements 1 Signaling (ATC)	Mile	\$ 2,070,000			0.23	\$ 470,455			0.23	\$ 470,455
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.23				0.23	
3 Wayside Protection System	Mile	\$ 108,000			0.23	\$ 24,545			0.23	\$ 24,545
Electrification Items										
1 Traction Power supply	Mile	\$ 1,170,000			0.23	\$ 265,909			0.23	\$ 265,909
2 Traction Power Distribution	Mile	\$ 1,485,000			0.23	\$ 337,500			0.23	\$ 337,500
Subtotal						\$ 2,467,481				\$ 41,023,603
Program Implementation Costs (per screening) Program Implementation Costs						\$ 629,208				\$ 10,461,019
Contingencies (per screening) (25%)						\$ 616,870				\$ 10,255,901
Colored						A 0710 F				A (6=10==
Subtotal (Rounded)						\$ 3,713,559 \$ 4,000,000				\$ 62,000,000

Subtotal (Rounded) \$ 4,000,000 \$ 62,000,000



COST ELEMENTS	UNIT UNIT PRICE		At-Grade	(2 Tracks)			At-Grade	(4 Tracks)			Tunnel	
Subsection 1	Base: 2009 (3rd Quarter))			Г	<u> </u>			D	
	(3rd Quarter)	Start: 267 + 00	End: 315 + 00	0.91 N	Miles	Start: 267 + 00	End: 315 + 00	0.91 Mi	les	Start: 267 + 00 End: 31	5 + 00 0.9	1 Miles
Subsection Details				Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 267 + 00 End: 31	0.00 Miles 5 + 00 0.91 Miles	
Double Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 267 + 00	End: 0 + 00 End: 315 + 00	0.00 Miles 0.91 Miles		Start: 0 + 00 End: 0 Start: 0 + 00	+ 00 0.00 Miles 0.00 Miles	_
Four Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00	Elia. 313 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile \$ 2,100,224			0.91	\$ 1,909,295			0.00 \$	_		0.00) \$ -
2 Double Track Section - On Structure	Mile \$ 4,700,160			0.00	\$ -			0.00 \$	-		0.00	\$ -
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile \$ 4,700,160 Mile \$ 4,700,160			0.00 0.00				0.00 \$ 0.00 \$			0.9	
4 Double Hack Section - III Hench	Wille \$ 4,700,100			0.00	Ψ -			0.00 4			0.00	, φ
Four Track Section - Total	Mil- # 4 200 440			0.00	Φ.			0.00			0.00	
Four-track Section - At Grade Four-Track Section - On Structure	Mile \$ 4,200,448 Mile \$ 9,400,320			0.00	\$ - \$			0.00 \$ 0.91 \$			0.00) \$
Four-Track Section - In Tunnel or Subway	Mile \$ 9,400,320			0	\$ -			0 \$	-			\$
Four-Track Section - In Trench	Mile \$ 9,400,320			0	\$ -			0 \$	-		() \$ -
Single Track - Total												
5 Single Track Section - At Grade	Mile \$ 1,549,312			0	\$ -			0 \$				-
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile \$ 2,350,080 Mile \$ 2,350,080			0	\$ - \$			0 \$) \$ -) \$ -
8 Single Track Section - In Turnier of Subway	Mile \$ 2,350,080			0	\$ -			0 \$) \$ -
O Freight Double Treek, At C					¢							
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile \$ 2,839,552 Mile \$ 1,549,312			0	\$ - \$			0 \$				
	1,017,012				*							
Earthwork Items 1 Site Preparation - Undeveloped	Acre \$ 9,216			12.12	\$ 111,709			12.12 \$	111,709		0.00	
2 Total Cut	Acre \$ 9,216 CY \$ 6			0.00				0.00 \$			916667.00	
3 Total Fill	CY \$ 6			0.00	\$ -			0.00 \$	-		366667.00	\$ 2,306,306
4 Borrow 5 Spoil	CY \$ 13 CY \$ 13			0.00 0.00				0.00 \$ 0.00 \$			0.00 550000.00	
6 Landscape erosion Control	Acre \$ 6,144			0.85				0.85 \$			0.00	
7 Security Fencing (Both sides of ROW)	Mile \$ 144,384			0.00				0.00 \$			0.89	
8 Special Drainage Facilities	5% Earthwork				\$ 5,847			\$	5,847			\$ 763,077
Structures, Tunnels, Walls												
1 Standard Structure	Mile \$ 34,972,672			0.00	\$ -			0.91 \$	31,793,338		0.00	
2 High Structure 3 Long Span Structure	Mile \$ 40,424,448 Mile \$ 61,919,232				\$ - \$ -			\$	-			\$ -
4 Waterway Crossing - Primary	Mile \$ 85,342,208				\$ -			\$	-			\$ -
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 92,049,408 Mile \$ 142,731,264				\$ -			\$	-			\$ -
7 Twin Single Track TBM (<6 Miles)	Mile \$ 106,637,312				\$ -			\$	-			\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 176,720,896				\$ -			\$				\$ -
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile \$ 146,887,680 Mile \$ 79,200,000			0.00	\$ - \$ -			0.00 \$	-		0.9	
Double Track TBM (<6 Miles)	Mile \$ 106,637,312				*						0.00	
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 176,720,896				•							
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea \$ 126,205,952 ea \$ 442,368				\$ - \$ -			\$	-			\$ -
13 Cut & Cover Double Track Tunnel	Mile \$ 131,246,080			0.00				0.00 \$				\$ -
14 Trench Short 15 Trench Long	Mile \$ 78,843,904 Mile \$ 57,524,224			0.00	\$ -			0.00 \$	-			\$ -
16 Mechanical & Electrical for Tunnels	Mile \$ 11,848,704				\$ -			\$	-		0.9	10,771,549
17 Retaining Walls	Mile \$ 8,613,888			0.00				0.00 \$				\$
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile \$ 5,907,456 Mile \$ 131,246,080			0.00	\$ - \$			0.00 \$	-			\$ - \$
Four Track Drill & Blast	Mile \$ 131,240,000 Mile \$ 293,775,360				\$ -			\$	-			\$
Four Track Mined (Soft Soil)	Mile \$ 158,400,000				\$ -			\$	-			\$ -
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile \$ 213,274,624 Mile \$ 353,441,792											\$
Four Track Cut & Cover Tunnel	Mile \$ 262,492,160			0.00	\$ -			0.00 \$	-		0.00	*
Grade Separations												
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352				\$ -			\$	-			\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea \$ 19,926,528				\$ -			\$	-			\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea \$ 2,759,680 ea \$ 2,029,568				\$ - \$			\$				-
4 Roadway Crossing HSR - 4 Lane Roadway Order 2 Tracks (Urban)	ea \$ 2,029,508 ea \$ 3,563,520			0	\$ -			0 \$				\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea \$ 3,593,216				\$ -			\$	-			\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea \$ 2,850,816 ea \$ 3,171,328				\$ - \$			\$				\$ \$
7 Street Bridging HSR Trench	ea \$ 3,171,328 ea \$ 1,398,784				\$ -			\$				\$ -
8 Minor Crossing Closures	ea \$ 87,040				\$ -			\$	-			- \$
. I	1 1					1	1	I I		I I		

COST ELEMENTS	U	JNIT	UNIT PRICE		At-Grade	(2 Tracks)			At-Grade	(4 Tracks)			Tu	nnel	
Subsection 1			Base: 2009 (3rd Quarter))				D				D	
			isi u Quai tei i	Start: 267 + 00	End: 315 + 00	0.91	Miles	Start: 267 + 00	End: 315 + 00	0.91	Miles	Start: 267 + 00	End: 315 + 00	0.91	Miles
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 267 + 00	End: 315 + 00	0.91 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00		0.00 Miles	0031
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	F	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 267 + 00 Start: 0 + 00	End: 315 + 00	0.91 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Building Items				3tart. 0 + 00		0.00 Miles		Start. 0 + 00		0.00 Wiles		Start. 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations		Each \$					\$ -				\$ -				\$ -
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade		Each \$	\$15,000,000				\$ -				-				\$ -
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure			\$15,000,000				\$ -				- \$				\$ -
Caltrain Passenger Station - In Tunnel or Subway		Each	\$15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Trench			\$15,000,000				\$ -				\$ -				\$ -
3 Maintenance Facility			123,921,884				-				-				\$ -
4 Parking - Structures 5 Parking - At Grade		pace \$ pace \$					\$ -				\$ -				\$ -
	31	V					· ·				_				-
Rail & Utility Relocation															
Single Track Relocation (Temporary) Single Track Relocation (Permanent)		ile \$ ile \$					\$ -				-				\$ -
3 Single Track Renoval		lile \$					\$ -				- \$				\$ -
4 Major Utility Relocations - Dense Urban		lile \$					\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban		lile \$					\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban		lile \$					\$ -				-				\$ -
8 Major Utility Relocations - Suburban		lile \$					\$ -				\$ -				\$ -
ROW (NOT INCLUDED) ROW required for each segment		,	25,125				·				Ť				
1 Dense Urban	Ac	cre \$	2,786,321				\$ -				\$ -				\$ -
2 Urban		cre \$	1,371,510				\$ -				\$ -				\$ -
3 Dense Suburban		cre \$					\$ -				-				\$ -
4 Suburban 5 Undeveloped		cre \$					\$ -				-				-
ROW required for Temp. Construction Easement		cre	3,042				φ -				-				\$ -
1 Dense Urban	Ad	cre					\$ -				\$ -				\$ -
2 Urban		cre					-				-				\$ -
3 Dense Suburban 4 Suburban		cre cre					\$ -				-				-
5 Undeveloped		cre					\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6 Dense Urban 7 Urban		cre \$	2,786,321 1,371,510				\$ -				-				\$ -
8 Dense Suburban		cre \$					\$ -				\$ -				\$ -
9 Suburban			208,418				\$ -				\$ -				\$ -
10 Undeveloped	Ad	cre \$	3,642				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs							\$ 60,962				\$ 1,213,856				\$ 4,938,099
System Elements															
1 Signaling (ATC)		lile \$				0.91				0.91				0.91	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	M	lile \$ lile \$				0.91 0.91				0.91 0.91				0.91 0.91	
Jwayside Flotection System	IM	ine 3	100,000			0.91	ψ 70,182			0.91	φ 70,182			0.91	φ 90,182
Electrification Items															
1 Traction Power supply			1,170,000			0.91				0.91				0.91	
2 Traction Power Distribution	Subtotal M	lile \$	1,485,000			0.91	\$ 1,350,000 \$ 6,977,580			0.91	\$ 1,350,000 \$ 46,560,263			0.91	\$ 1,350,000 \$ 174,425,945
Program Implementation Costs (per screening) Program Implementation Costs	Subtotal						\$ 1,779,283				\$ 11,872,867				\$ 44,478,616
Contingencies (per screening) (25%)							\$ 1,744,395				\$ 11,640,066				\$ 43,606,486
Subtotal							\$ 10,501,258		•	•	\$ 70,073,196		· · · · · · · · · · · · · · · · · · ·		\$ 262,511,047
Subtotal (Poundod)							\$ 11 000 000				\$ 70,000,000				\$ 262,000,000

Subtotal (Rounded) \$ 70,000,000 \$ 263,000,000

COST ELEMENTS	UNIT UNIT PRICE		At-Grade	(2 Tracks)			At-Grade	e (4 Tracks)			Tu	ınnel	
ubsection 1	Base: 2009 (3rd Quarter)			F				E				E	
	(Si u Quarter)	Start: 315 + 00	End: 350 + 00	0.66	Miles	Start: 315 + 00	End: 350 + 00	0.66 Mil	les	Start: 315 + 00	Start: 350 + 00	0.66 Mile	es
uhacation Dataila								0,	01			0	04
ubsection Details ouble Track At-Grade (Mile)		Start: 315 + 00	End: 350 + 00	Quant. 0.66 Miles	Cost	Start: 315 + 00	End: 350 + 00	Quant. 0.66 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
ouble Track Elevated (Mile)		Start: 0 + 00	Zilar dod i do	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	Endro : co	0.00 Miles	
ouble Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles	
ouble Track Trench (Mile) our Track Construction/Reconstruction At-Grade (Mile)		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
our Track Elevated (Mile)		Start: 0 + 00	Ziidi 0 + 00	0.00 Miles		Start: 0 + 00	Zilai o i oo	0.00 Miles		Start: 0 + 00	Endro : co	0.00 Miles	
our Track Tunnel (Mile) our Track Trench (Mile)		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile \$ 2,100,224			0.66				0.66 \$	1,392,194			0.00 \$	
2 Double Track Section - On Structure	Mile \$ 4,700,160 Mile \$ 4,700,160			0.00 0.00				0.00 \$ 0.66 \$	2 11E 424			0.00 \$	2 115 /
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile \$ 4,700,160 Mile \$ 4,700,160			0.00				0.00 \$	3,115,636			0.66 \$ 0.00 \$	3,115,6
Four Track Section - Total Four-track Section - At Grade	Mile \$ 4,200,448			0.00	¢			0.00				0.00	
Four-track Section - At Grade Four-Track Section - On Structure	Mile \$ 4,200,448 Mile \$ 9,400,320			0.00				0.00 \$	-			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile \$ 9,400,320			0				0 \$	-			0 \$	
Four-Track Section - In Trench	Mile \$ 9,400,320			0	\$ -			0 \$	-			0 \$	
Single Track - Total													
5 Single Track Section - At Grade	Mile \$ 1,549,312			0	\$ -			0 \$	-			0 \$	
Single Track Section - On structure	Mile \$ 2,350,080			0				0 \$	-			0 \$	
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile \$ 2,350,080 Mile \$ 2,350,080			0				0 \$	-			0 \$	
					•								
Freight Double Track - At Grade	Mile \$ 2,839,552			0	\$ -			0 \$	-			0 \$	
0 Freight Single Track - At Grade	Mile \$ 1,549,312			0	-			0 \$	-			0 \$	
Earthwork Items													
1 Site Preparation - Undeveloped	Acre \$ 9,216			8.84				8.84 \$	81,469			8.84 \$	81,4
2 Total Cut 3 Total Fill	CY \$ 6 CY \$ 6			0.00 0.00				0.00 \$ 0.00 \$	-			231815.00 \$ 92726.00 \$	1,495,4 583,2
4 Borrow	CY \$ 6 CY \$ 13			0.00				0.00 \$	-			0.00 \$	ეგე,2
5 Spoil	CY \$ 13			0.00	\$ -			0.00 \$	-			139089.00 \$	1,749,7
6 Landscape erosion Control 7 Security Foreign (Path cides of POW)	Acre \$ 6,144 Mile \$ 144,384			0.66				0.66 \$	4,055			2.87 \$	17,6
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile \$ 144,384 5% Earthwork			0.00	\$ - \$ 4,276			0.00 \$	4,276			0.22 \$	31,70 197,90
	O.S Zartinork				, T,210				7,210				171,7
Structures, Tunnels, Walls	MAILS OF STORES				Φ.								
1 Standard Structure 2 High Structure	Mile \$ 34,972,672 Mile \$ 40,424,448			0.00	\$ - \$			0.00 \$	-			0.00 \$	
Long Span Structure	Mile \$ 40,424,448				\$ -			\$	-			\$	
4 Waterway Crossing - Primary	Mile \$ 85,342,208				\$ -			\$	-			\$	
Waterway Crossing - Secondary (Irrigation Canal) Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 92,049,408 Mile \$ 142,731,264				\$ - \$			\$	-			\$	
Twin Single Track Drill&Blast (<6 Miles) Twin Single Track TBM (<6 Miles)	Mile \$ 142,731,264 Mile \$ 106,637,312				\$ - \$ -			\$	-			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 176,720,896				\$ -			\$	-			\$	
9 Double Track Drill & Blast 0 Double Track Mined (Soft Soil)	Mile \$ 146,887,680 Mile \$ 79,200,000			0.00	\$ -			0.66 \$	97,368,727			0.66 \$	97,368,7
Double Track Mined (Soil Soil) Double Track TBM (<6 Miles)	Mile \$ 79,200,000 Mile \$ 106,637,312				ψ -				-				
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 176,720,896												
1 Seismic Chamber (Drill & Blast/Mined)	ea \$ 126,205,952				\$ -			\$	-			\$	
2 Crossovers 3 Cut & Cover Double Track Tunnel	ea \$ 442,368 Mile \$ 131,246,080			0.00	\$ -			0.00 \$	-			0.00 \$	
4 Trench Short	Mile \$ 78,843,904			0.00	\$ -			0.00 \$	-			\$	
5 Trench Long	Mile \$ 57,524,224				\$ -			\$	-			\$	7.054
6 Mechanical & Electrical for Tunnels 7 Retaining Walls	Mile \$ 11,848,704 Mile \$ 8,613,888			0.00	\$ - \$ -			0.00 \$	-			0.66 \$	7,854,
Containment Walls	Mile \$ 5,907,456			0.00				0.00 \$	-			\$	
Single Track Cut and Cover Subway	Mile \$ 131,246,080				\$ -			\$	-			\$	
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile \$ 293,775,360 Mile \$ 158,400,000				\$ - \$			\$	-			\$	
Four Track Milled (Soft Soft) Four Track TBM (<6 Miles)	Mile \$ 158,400,000 Mile \$ 213,274,624				Ψ -				-			0.00 \$	
Four Track TBM w/3rd Tube (>6 Miles)	Mile \$ 353,441,792											\$	
Four Track Cut & Cover Tunnel	Mile \$ 262,492,160			0.00	\$ -			0.00 \$	-			\$	
Grade Separations													
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352				\$ -			\$	-			\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea \$ 19,926,528				\$ -			\$	-			\$	
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea \$ 2,759,680 ea \$ 2,029,568				\$ - \$			\$	-			\$	
4 Roadway Crossing HSR - 4 Lane Roadway Order 2 Tracks (Urban)	ea \$ 2,029,508 ea \$ 3,563,520			0	\$ -			0 \$	-			\$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea \$ 3,593,216				\$ -			\$	-			\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea \$ 2,850,816				\$ -			\$	-			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea \$ 3,171,328 ea \$ 1,398,784				\$ - \$ -			\$	-			0 \$	
					\$ -			"	_	İ		0 \$	
8 Minor Crossing Closures	ea \$ 87,040			l l	D -			D. D				0 \$	

COST ELEMENTS	U	NIT UNI	IT PRICE		At-Grade	(2 Tracks)			At-Grade	(4 Tracks)			Tu	ınnel		
Subsection 1			se: 2009			_				_				-		
		(3rd	Quarter)	Start: 315 + 00	End: 350 + 00	0.66	Miles	Start: 315 + 00	End: 350 + 00	0.60	5 Miles	Start: 315 + 00	Start: 350 + 00	0.6	Miles	
			-												1	
Subsection Details Double Track At-Grade (Mile)				Start: 315 + 00	End: 350 + 00	Quant. 0.66 Miles	Cost	Start: 315 + 00	End: 350 + 00	Quant. 0.66 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	(Cost
Double Track Elevated (Mile)			•	Start: 0 + 00	E110. 000 1 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		
Double Track Tunnel (Mile)			-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 315 + 00 Start: 0 + 00	End: 350 + 00	0.66 Miles 0.00 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles 0.00 Miles		
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile) Four Track Trench (Mile)			-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		
Building Items				Start. 0 1 00		0.00 Miles		Start: 0 1 00		0.00 Miles	1	Start. 0 1 00	Liid. 0 1 00	0.00 Willes		
1 Intermediate Passenger Stations		ach \$	-				\$	-			-				\$	-
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade		ach \$ ach \$15	5,000,000				\$				\$ -				\$	-
Caltrain Passenger Station - On Structure	E	ach \$15	5,000,000				\$	-			\$ -				\$	-
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench			5,000,000 5,000,000				\$	-			-				\$	-
3 Maintenance Facility			3,000,000				\$	-			\$ -				\$	-
4 Parking - Structures		pace \$	-				\$	-			\$ -				\$	-
5 Parking - At Grade	st	pace \$	-				\$	-			-				\$	-
Rail & Utility Relocation																
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)			2,000,896				\$	-			-				\$	-
3 Single Track Renoval		ile \$ 2	2,000,896 130,048				\$	-			\$ -				\$	-
4 Major Utility Relocations - Dense Urban	M	ile \$	1,548,288				\$	-			\$ -				\$	-
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban		ile \$	1,084,416 775,168				\$	-			\$ -				\$	-
7 Major Utility Relocations - Suburban		ile \$	464,896				\$	-			\$ -				\$	-
8 Major Utility Relocations - Undeveloped	М	ile \$	30,720				\$	-			\$ -				\$	-
ROW (NOT INCLUDED) ROW required for each segment																
1 Dense Urban			2,786,321				\$	-			\$ -				\$	-
2 Urban 3 Dense Suburban		cre \$ 7	1,371,510 908,134				\$								\$	-
4 Suburban		cre \$	208,418				\$	-			\$ -				\$	-
5 Undeveloped ROW required for Temp. Construction Easement		cre \$	3,642				\$	-			\$ -				\$	-
1 Dense Urban		cre cre					\$	_			\$ -				\$	-
2 Urban		cre					\$	-			\$ -				\$	-
3 Dense Suburban 4 Suburban		cre cre					\$	-			\$ - \$ -				\$	
5 Undeveloped		cre					\$	-			\$ -				\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	٨	ero ¢ ′	2 704 221				¢				¢				¢	
7 Urban			2,786,321 1,371,510				\$				\$ -				\$	-
8 Dense Suburban	Ad	cre \$	908,134				\$	-			\$ -				\$	-
9 Suburban 10 Undeveloped	Ac Ac	cre \$	208,418 3,642				\$	-			\$ -				\$	
Environmental Mitigation = 3% Line Costs			-,				\$ 44,4	60			\$ 3,058,991				\$	3,374,877
System Elements																
1 Signaling (ATC)	М	ile \$ 2	2,070,000			0.66				0.66				0.66		1,372,159
2 Communications (w/ Fiber Optic Backbone)		ile \$	540,000			0.66	\$ 357,9	55		0.66	\$ 357,955			0.66	\$	357,955
3 Wayside Protection System	M	ile \$	108,000			0.66	\$ 71,5	71		0.66	\$ 71,591			0.66	\$	71,591
Electrification Items																
1 Traction Power supply 2 Traction Power Distribution			1,170,000 1,485,000			0.66 0.66				0.66 0.66			1	0.66 0.66		775,568 984,375
Z Haction Power Distribution	Subtotal	iic >	1,400,000			U.66	\$ 984,3			0.60	\$ 984,375			0.66		19,432,417
Program Implementation Costs (per screening) Program Implementation Costs							\$ 1,297,4				\$ 27,689,684					30,455,266
Contingencies (per screening) (25%)							\$ 1,272,0	26			\$ 27,146,749				\$	29,858,104
Subtotal	ı						\$ 7,657,5	94			\$ 163,423,430			•	\$ 1	79,745,787
C. (b4-4-1 /Ddd)							ė 0,000 0				¢ 1/2 000 000				r 100	

COST ELEMENTS	UNIT UNIT PRICE		At-Grade (2 Tracks)			At-Grade	e (4 Tracks)			Tu	ınnel	
Subsection 1	Base: 2009 (3rd Quarter)		F	· · · · · · · · · · · · · · · · · · ·			·	F				F	
	(Siù Quaitel)	Start: 350 + 00	End: 376 + 00	0.49	Miles	Start: 350 + 00	End: 376 + 00	0.49 M	iles	Start: 350 + 00	Start: 376 + 00	0.49 Miles	S
Subsection Details				Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)		Start: 350 + 00	End: 376 + 00	0.49 Miles	*	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 350 + 00	End: 376 + 00	0.00 Miles 0.49 Miles	
Double Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	Elia: 070 1 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 350 + 00 Start: 0 + 00	End: 376 + 00	0.49 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)	1 1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile \$ 2,100,224			0.49	\$ 1,034,201			0.00 \$	_			0.00 \$	
2 Double Track Section - On Structure	Mile \$ 4,700,160			0.00	\$			0.00 \$	-			0.00 \$	-
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile \$ 4,700,160 Mile \$ 4,700,160			0.00 0.00				0.00 \$				0.49 \$ 0.00 \$	2,314,473
4 Double Hack Section - III Hench	Wille \$ 4,700,100			0.00	Ψ .			0.00	-			0.00 \$	
Four Track Section - Total				2.00				0.40	0.040.400			0.00	
Four-track Section - At Grade Four-Track Section - On Structure	Mile \$ 4,200,448 Mile \$ 9,400,320			0.00				0.49 \$				0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile \$ 9,400,320			0	\$,		0 \$	-			0 \$	-
Four-Track Section - In Trench	Mile \$ 9,400,320			0	\$			0 \$	-			0 \$	-
Single Track - Total													
5 Single Track Section - At Grade	Mile \$ 1,549,312 Mile \$ 2,350,080			0	\$			0 \$				0 \$	-
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile \$ 2,350,080 Mile \$ 2,350,080			0	\$			0 \$				0 \$	
8 Single Track Section - In Trench	Mile \$ 2,350,080			0	\$			0 \$				0 \$	-
9 Freight Double Track - At Grade	Mile \$ 2,839,552			Λ	\$			0 \$				0 \$	_
10 Freight Single Track - At Grade	Mile \$ 2,639,332 Mile \$ 1,549,312			0	\$			0 \$				0 \$	-
Farthwork Itams													
Earthwork Items 1 Site Preparation - Undeveloped	Acre \$ 9,216			6.57	\$ 60,549	,		6.57 \$	60,549			6.57 \$	60,549
2 Total Cut	CY \$ 6			0.00	\$			0.00 \$	-			529629.00 \$	3,416,743
3 Total Fill 4 Borrow	CY \$ 6 CY \$ 13			0.00 0.00				0.00 \$				211851.00 \$ 0.00 \$	1,332,526
5 Spoil	CY \$ 13			0.00	\$			0.00 \$	-			317778.00 \$	3,997,596
6 Landscape erosion Control	Acre \$ 6,144 Mile \$ 144,384			0.49				0.49 \$				6.57 \$	40,366
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile \$ 144,384 5% Earthwork			0.00	\$ 3,178			0.49 \$	71,098 6,733			0.49 \$	70,748 445,926
Structures, Tunnels, Walls 1 Standard Structure	Mile \$ 34,972,672			0.00	\$			0.00 \$	_			0.00 \$	-
2 High Structure	Mile \$ 40,424,448			0.00	\$			3.33	-			\$	-
3 Long Span Structure 4 Waterway Crossing - Primary	Mile \$ 61,919,232 Mile \$ 85,342,208				\$			\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile \$ 92,049,408				\$				-			\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 142,731,264				\$			\$	-			\$	-
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 106,637,312 Mile \$ 176,720,896				\$			\$	-			\$	-
9 Double Track Drill & Blast	Mile \$ 146,887,680			0.00	\$			0.00 \$	-			0.49 \$	72,331,055
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile \$ 79,200,000 Mile \$ 106,637,312				\$				-			\$	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 176,720,896												
11 Seismic Chamber (Drill & Blast/Mined)	ea \$ 126,205,952 ea \$ 442,368				\$			\$	-			\$	-
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea \$ 442,368 Mile \$ 131,246,080			0.00	\$			0.00 \$				0.00 \$	-
14 Trench Short	Mile \$ 78,843,904			0.00	\$			0.00 \$	-			\$	-
15 Trench Long 16 Mechanical & Electrical for Tunnels	Mile \$ 57,524,224 Mile \$ 11,848,704				\$			\$	-			0.49 \$	5,834,589
17 Retaining Walls	Mile \$ 8,613,888			0.00				0.00 \$				\$	-,,,
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile \$ 5,907,456 Mile \$ 131,246,080			0.00	\$			0.00 \$	-			\$	-
Four Track Drill & Blast	Mile \$ 293,775,360				\$				-			\$	-
Four Track Mined (Soft Soil)	Mile \$ 158,400,000				\$			\$	-			\$ 0.00	-
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile \$ 213,274,624 Mile \$ 353,441,792											0.00 \$	-
Four Track Cut & Cover Tunnel	Mile \$ 262,492,160			0.00	\$	-		0.00 \$	-			\$	-
Grade Separations													
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352				\$			\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea \$ 19,926,528 ea \$ 2,759,680				\$			\$	-			\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea \$ 2,759,680 ea \$ 2,029,568				\$			3	-			\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea \$ 3,563,520			0	\$	-		0 \$				\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea \$ 3,593,216 ea \$ 2,850,816				\$			\$				\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea \$ 3,171,328				\$			\$	-			\$	-
7 Street Bridging HSR Trench	ea \$ 1,398,784				\$			\$	-			0 \$	-
oliviii ot Clossifig Closules	ea \$ 87,040				D				-			0 \$	-
8 Minor Crossing Closures	ea \$ 87,040				\$			\$	-			0 \$	

COST ELEMENTS	UNIT			At-Grade	(2 Tracks)			At-Grade	(4 Tracks)			Τι	ınnel	
Subsection 1		Base: 2009 (3rd Quarter)			F				F				F	
		(Siù Quaitei)	Start: 350 + 00	End: 376 + 00	0.49	Miles	Start: 350 + 00	End: 376 + 00	0.49	Miles	Start: 350 + 00	Start: 376 + 00	0.4	9 Miles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 350 + 00	End: 376 + 00	0.49 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031	Start: 0 + 00	End: 0 + 00	0.00 Miles	0031
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 350 + 00	End: 376 + 00	0.00 Miles 0.49 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles	1	Start: 0 + 00		0.00 Miles		Start: 0 + 00	Liid. 370 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Building Items 1 Intermediate Passenger Stations	Each					•				*				¢
2 Terminal Passenger Stations	Each					\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each					\$ -				\$ -				\$ -
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each					-				\$ -				\$ •
Caltrain Passenger Station - In Trench	Each					\$ -				\$ -				\$ -
3 Maintenance Facility	Each	1 \$ 123,921,884				\$ -				\$ -				\$ -
4 Parking - Structures 5 Parking - At Grade	space					-				\$ -				-
STEATHING - AL GLAUE	space	-				φ -				φ -				-
Rail & Utility Relocation										A 0==				
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896			0.49	\$ 980,439			0.49	\$ 980,439				\$ -
3 Single Track Removal	Mile	\$ 130,048			0.49	\$ 63,724			0.49	\$ 63,724				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			0.49	\$ 758,661			0.49					\$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168				-				\$ -				\$ •
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -
ROW (NOT INCLUDED)														
ROW required for each segment														
1 Dense Urban	Acre	\$ 2,786,321				-				\$ -				-
2 Urban 3 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ - \$ -				\$ -				\$ -
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -
5 Undeveloped ROW required for Temp. Construction Easement	Acre Acre	\$ 3,642				\$ -				-				-
1 Dense Urban	Acre					\$ -				\$ -				\$ -
2 Urban	Acre					\$ -				\$ -				\$ -
3 Dense Suburban 4 Suburban	Acre Acre					-				\$ -				-
5 Undeveloped	Acre					\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities														·
6 Dense Urban 7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				-				\$ -				\$ -
8 Dense Suburban	Acre					\$ -				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				\$ - \$ 87,113				\$ - \$ 120,379				\$ - \$ 2,695,337
		1				Ψ 07,113				ψ 12U,3/7				Ψ 2,070,337
System Elements										A 40400:-				
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			0.49 0.49				0.49 0.49				0.49 0.49	
3 Wayside Protection System	Mile	\$ 108,000			0.49				0.49				0.49	
Electrification Items		1												
Electrification Items 1 Traction Power supply	Mile	\$ 1,170,000			0.49	\$ 576,136			0.49	\$ 576,136			0.49	\$ 576,136
2 Traction Power Distribution	Mile	\$ 1,485,000			0.49	\$ 731,250			0.49	\$ 731,250			0.49	\$ 731,250
Program Implementation Costs (per screening) Program Implementation Costs	Subtotal					\$ 5,636,671 \$ 1,437,351				\$ 6,778,791 \$ 1,728,592				\$ 95,185,704 \$ 24,272,354
Contingencies (per screening) (25%)						\$ 1,409,168				\$ 1,694,698				\$ 23,796,426
Subtotal						\$ 8,483,190				\$ 10,202,080				\$ 143,254,484
Subtotal (Pounded)						\$ 8,000,000				\$ 10,000,000	•			\$ 1/3 000 000

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	(2 Tracks)			At-Grade ((4 Tracks)			Tun	nel	
ubsection 1		Base: 2009 (3rd Quarter)			G			G				G		
		Quarter)	Start: 376 + 00	End: 450 + 00	1.40 M	liles	Start: 376 + 00	End: 450 + 00	1.40 Mile	es	Start: 376 + 00	Start: 450 + 00	1.40 N	Miles
ubsection Details ouble Track At-Grade (Mile)			Start: 376 + 00	End: 450 + 00	Quant. 1.40 Miles	Cost	Start: 376 + 00	End: 450 + 00	Quant. 1.40 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
ouble Track Elevated (Mile)			Start: 0 + 00	E110. 430 + 00	0.00 Miles		Start: 0 + 00	E110. 450 + 00	0.00 Miles		Start: 0 + 00	E110. 0 + 00	0.00 Miles	
ouble Track Tunnel (Mile)				End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles	
ouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile)				End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile) our Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
our Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total														
1 Double Track Section - At Grade	Mile	\$ 2,100,224			1.40				0.66 \$	1,389,330			0.00 \$	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$ 0.00 \$				0.00 \$ 0.74 \$	3,478,118			0.00 \$ 1.40 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00				0.00 \$	5,470,110			0.00 \$	
Todas Tradicional III Transis.		1// 00/100			0.00				0.00				0.00	
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	-			0.00 \$	-			0.00 \$	
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0 3	-			0 \$	-			0 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0 3	-			0 \$	-			0 \$	
		1,100,000]								1	
Single Track - Total														
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0 9	-			0 \$	-			0 \$	
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080			0 3	-			0 \$	-			0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0 4	-			0 \$	-			0 \$	
	Willio	2,550,550				,			0				o v	,
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0 \$	-			0 \$	-			0 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0 9	-			0 \$	-			0 \$	5
Earthwork Items														
1 Site Preparation - Undeveloped	Acre	\$ 9,216			18.69	172,218			18.69 \$	172,218			18.69 \$	3 172,2
2 Total Cut	CY	\$ 6			0.00				0.00 \$	-			72314.81 \$	
3 Total Fill	CY	\$ 6			0.00				0.00 \$	-			28925.93 \$	
4 Borrow	CY	\$ 13			0.00				0.00 \$	-			0.00 \$	
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 13 \$ 6,144			0.00 \$ 0.74 \$				0.00 \$ 0.74 \$	4,547			43388.89 \$ 0.90 \$	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00				0.00 \$	4,547			0.70 \$	
8 Special Drainage Facilities	5% Ear	1 '				8,838			\$	8,838			\$	
Structures, Tunnels, Walls 1 Standard Structure	Milo	¢ 24.072.772			0.00				0.00 \$				0.00 \$	
2 High Structure	Mile Mile	\$ 34,972,672 \$ 40,424,448			0.00	-			0.00 \$	-			0.00 \$	
3 Long Span Structure	Mile	\$ 61,919,232				-			\$	-			\$, }
4 Waterway Crossing - Primary	Mile	\$ 85,342,208			9	-			\$	-			\$	\$
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			9	-			\$	-			\$	\$
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				-			\$	-			\$	
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896				-			\$	-			\$)
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	-			0.74 \$	108,696,883			1.40 \$	•
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			9	-			\$	-			\$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312												
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896												•
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368							\$	-			\$	
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	-			0.00 \$	-			0.00 \$, }
14 Trench Short	Mile	\$ 78,843,904	1		0.00				0.00 \$	-			\$	\$
Trench Long	Mile	\$ 57,524,224				-			\$	=			\$ 1.40	
16 Mechanical & Electrical for Tunnels 17 Retaining Walls	Mile	\$ 11,848,704			0.00	-			0.00	-			1.40 \$	
17 Retaining walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0.00	- -			0.00 \$	-			\$,
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			0.00	-			\$	-			\$,
Four Track Drill & Blast	Mile	\$ 293,775,360				-			\$	-			\$	\$
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			1	-			\$	-				
Four Track TBM (<6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792											\$	>
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile	\$ 353,441,792 \$ 262,492,160			0.00	; <u> </u>			0.00 \$	-			\$	5
		202,172,100			0.00				3.00				ľ	•
Grade Separations														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				-			\$	-			\$	5
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				-			\$	-			\$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,759,680				; <u> </u>			\$	-			\$, S
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			0 3	-			0 \$	-			\$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216							\$	-			\$	\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			1	-			\$	-			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				-			\$	-			\$	
7 Charak Dalahina LICD Tanani		A 000 70 :				,			1.0					
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040				-			\$	-			0 \$	

COST ELEMENTS	U	INIT	UNIT PRICE		At-Grade	(2 Tracks)				At-Grade	e (4 Tracks)			Ti	unnel	
Subsection 1		ı	Base: 2009 (3rd													
			Quarter)	Start: 376 + 00		G 1 40	Miles	Start: 376	S + 00	End: 450 + 00	G 1 4/) Miles	Start: 376 + 00	Start: 450 + 00	G	0 Miles
			ŀ	3tart. 370 + 00	L11u. 430 + 00	1.40	/ WIIIeS	Start. 370	7 + 00	L110. 450 + 00	1.40) Willes	Start. 370 + 00	Start. 450 + 00	1.4	o ivilles
Subsection Details		· ·				Quant.	Cost				Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 376		End: 450 + 00	1.40 Miles	4	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			ŀ	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0		End: 0 + 00	0.00 Miles 0.00 Miles	4	Start: 0 + 00 Start: 376 + 00	End: 450 + 00	0.00 Miles 1.40 Miles	
Double Track Trench (Mile)				Start: 0 + 00	End. 0 1 00	0.00 Miles		Start: 0		Elia. 0 1 00	0.00 Miles	1	Start: 0 + 00	E11d. 430 1 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0		End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0			0.00 Miles	1	Start: 0 + 00	F 1 0 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			-	Start: 0 + 00 Start: 0 + 00	+	0.00 Miles 0.00 Miles		Start: 0			0.00 Miles 0.00 Miles	4	Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Building Items				Start. 0 1 00		0.00 Willes		Start. 0	1 00		0.00 Willes		Start. 0 1 00	Elia. 0 1 00	0.00 Willes	
1 Intermediate Passenger Stations		ach \$					\$	-				\$ -				\$ -
2 Terminal Passenger Stations		ach \$					\$ 15,000	-				\$ -				\$ -
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure		ach ach	\$15,000,000 \$15,000,000			1	\$ 15,000,	000			'	\$ 15,000,000				\$ -
Caltrain Passenger Station - In Tunnel or Subway		ach	\$15,000,000				\$	-				\$ -			1	\$ 15,000,000
Caltrain Passenger Station - In Trench	E	ach	\$15,000,000				\$	-				\$ -				\$ -
3 Maintenance Facility		ach \$	123,921,884				\$	-				\$ -				-
4 Parking - Structures 5 Parking - At Grade		pace \$			1		\$	-				\$ -				- 4
JI aiking - At Grauc	2	vare \$	· -		1		Ψ	-				-				φ -
Rail & Utility Relocation					1											
1 Single Track Relocation (Temporary)	M		-11		1	0.70	\$ 1,400	527			0.70	\$ 1,400,627				\$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal	M	ile \$,			0 70	¢ 01	124			0.70	01.034				\$ -
4 Major Utility Relocations - Dense Urban		ile \$,			0.70 0.74					0.70 0.74					\$ -
5 Major Utility Relocations - Urban		ile \$				0.74	\$ 1,143,	-			0.74	\$ 1,145,755				\$ -
6 Major Utility Relocations - Dense Suburban	M		.,				\$	-				\$ -				\$ -
7 Major Utility Relocations - Suburban		ile \$					\$	-				\$ -				-
8 Major Utility Relocations - Undeveloped	М	ile \$	30,720				\$	-				\$ -				\$ -
ROW (NOT INCLUDED)																
ROW required for each segment																
1 Dense Urban		cre \$					\$	-				-				-
2 Urban 3 Dense Suburban		cre \$					\$	-				\$ -				-
4 Suburban		cre \$					\$					\$ -				\$ -
5 Undeveloped		cre \$					\$	-				\$ -				\$ -
ROW required for Temp. Construction Easement		cre													0	-
1 Dense Urban 2 Urban		cre cre					\$	-				\$ -				-
3 Dense Suburban		cre					\$	-				\$ -				\$ -
4 Suburban		cre					\$	-				\$ -				\$ -
5 Undeveloped	A	cre					\$	-				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Δ.	ara d	2,786,321				¢					¢				¢
6 Dense Urban 7 Urban		cre \$					\$					\$				\$ -
8 Dense Suburban	A	cre \$	908,134				\$	-				\$ -				\$ -
9 Suburban		cre \$					\$	-				\$ -				\$ -
10 Undeveloped	A	cre \$	3,642				\$ \$ 622,	-				\$ - \$ 3,941,620				\$ 7,365,288
Environmental Mitigation = 3% Line Costs					1		φ 022,	773				\$ 3,941,020				φ /,303,288
System Elements					1											
1 Signaling (ATC)		ile \$			1	1.40						\$ 2,901,136			1.40	
2 Communications (w/ Fiber Optic Backbone)	M	ile \$,		1	1.40 1.40					1.40				1.40 1.40	
3 Wayside Protection System	IVI	iie \$	108,000		1	1.40	φ 151,	004			1.40	\$ 151,364			1.40	φ 151,364
Electrification Items					1											
1 Traction Power supply		ile \$	1/1/0/000		1	1.40						\$ 1,639,773			1.40	
2 Traction Power Distribution	M	ile \$	1,485,000		1	1.40					1.40	\$ 2,081,250			1.40	
Program Implementation Costs (per screening)	Subtotal				1		\$ 28,919, \$ 7,374,					\$ 142,859,289 \$ 36,429,119				\$ 260,405,226 \$ 66,403,333
Program Implementation Costs (per screening)					1		7,374,					50,727,117				÷ 00,700,333
					1		1.									
Contingencies (per screening) (25%)					1		\$ 7,229,	957				\$ 35,714,822				\$ 65,101,306
Subtotal					1		\$ 43,524	242				¢ 215.002.220				\$ 391,909,864
Subtotal							\$ 43,524,	042				\$ 215,003,230	<u> </u>			D 391,909,864

	2A (4.2 miles)	2B (1.0 miles)	2C1 (1.0 miles)			2C2 (1.3 miles)				2D (1.2 miles)	
Subsection 2	At Grade	Berm	Berm	Aerial Viaduct	Berm	At Grade	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)	At Grade	Open Trench (HST Only)	Covered Trench (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$74	\$66	\$51	\$97 (3 tracks); \$93 (2 tracks)	\$95 (3 tracks); \$57 (2 tracks)	· ·	•		\$37 (3 tracks); \$14 (2 tracks)		\$293 (1 track); \$342 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Medium	Medium	Medium	Medium	Highest	Medium	Lowest	Highest	Medium	Lowest
Notes:	Existing 4 tracks extends from the Caltrain Bayshore Station to just north of the US 101 overpass. Caltrain South San Francisco Station	1. Linden Ave and Scott St converted to undercrossings.	1. Assume Caltrain 2 track grade separation project completed (includes San Bruno Ave, San Mateo Ave, and Angus Ave converted to undercrossings).	existing Caltrain alignment for approach to Caltrain Millbrae station. <i>Must be combined</i>	option.	approach to Caltrain Millbrae station. 3. Center St and Santa Paula	Millbrae station. <i>Must</i> be combined with 2 track aerial viaduct, berm, or at grade	approach to HST Millbrae station. Must be combined with 2 track aerial viaduct, berm, or at grade option.	3 tracks (2 Caltrain-1 HST) - 1. Three tracks on existing Caltrain alignment for Caltrain and HST Millbrae station. Must be combined with 1 track open trench or tunnel option. 2. Caltrain Millbrae Station. 3. HST Millbrae Station (1 platform) 2 tracks (2 Caltrain) - 1. Two tracks on existing Caltrain alignment for Caltrain Millbrae station. Must be combined with 2 track open trench or tunnel option.	1. Two tracks on new alignment for HST Millbrae station. <i>Must be combined with 2 track at grade option.</i>	Must be combined with 2 track at grade option. 2. HST Millbrae

COST ELEMENTS ubsection 2	UNIT	UNIT F	PRICE		At-	Grade		
DSECTION 2		Base:		Start: 450 + 00	End: 671 + 00	A 4.19 N	Viles	
		(3rd Qu	larter)			_		
bsection Details uble Track At-Grade (Mile)				Start: 450 + 00	End: 671 + 00	Quant. 4.19 Miles		Cost
uble Track Elevated (Mile)				Start: 0 + 00	L11d. 071 1 00	0.00 Miles		
uble Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		
uble Track Trench (Mile)				Start: 0 + 00		0.00 Miles		
ur Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
ur Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
ır Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		
ur Track Trench (Mile)				Start: 0 + 00		0.00 Miles		
Double Track Section - Total Double Track Section - At Grade	Mile	¢ 21	00 224			4.10	¢	8.790.71
Double Track Section - At Grade Double Track Section - On Structure	Mile Mile		00,224			4.19 0.00		8,790,7
Double Track Section - On Structure Double Track Section - In Tunnel or Subway	Mile		00,160			0.00		
Double Track Section - In Trench	Mile		00,160			0.00		
Bodble Hack Section in Henen	IVIIIC	Ψ 4,7	00,100			0.00	Ψ	
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$ 4,2	00,448			0.00	\$	
Four-Track Section - On Structure	Mile	\$ 9,4	00,320			0	\$	
Four-Track Section - In Tunnel or Subway	Mile		00,320			0	\$	
Four-Track Section - In Trench	Mile	\$ 9,4	00,320			0.00	\$	
Single Track Section At Crade	N #:1 -	6 1-	10 212			2	¢	
Single Track Section - At Grade Single Track Section - On structure	Mile Mile		49,312			0	\$ \$	
Single Track Section - On Structure Single Track Section - In Tunnel or Subway	Mile		50,080			0	\$	
Single Track Section - In Trumer of Subway Single Track Section - In Trench	Mile		50,080			0		
Johnston action in trouble	INITE	Ψ ∠,3	00,000			U	Ψ	
Freight Double Track - At Grade	Mile	\$ 2,8	39,552			0	\$	
Freight Single Track - At Grade	Mile		49,312			0	\$	
Earthwork Items								
Site Preparation - Undeveloped	Acre	\$	9,216			32.98		303,9
Total Cut	CY	\$	6.00			0.00		
Total Fill	CY	\$	6.00			0.00		
Borrow	CY	\$	13.00			0.00		
Spoil	CY Acre	\$ \$	13.00 6,144			0.00 0.00		
Landscape erosion Control Security Fencing (Both sides of ROW)	Mile		44,384			0.00		
Special Drainage Facilities	5% Earl		44,304			0.00	\$	15,19
Special Drainage Facilities	370 Ear	IIIVOIK					Ψ	10,1
Structures, Tunnels, Walls								
Standard Structure	Mile	\$ 34,9	72,672			0.00	\$	
High Structure	Mile	\$ 40,4	24,448				\$	
Long Span Structure	Mile	\$ 61,9	19,232				\$	
Waterway Crossing - Primary	Mile	\$ 85,3	42,208				\$	
Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,0				0.02	\$	1,743,3
Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,7					\$	
Twin Single Track TBM (<6 Miles)	Mile	\$ 106,6					\$	
Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,7					\$	
Double Track Drill & Blast	Mile	\$ 146,8				0.00	\$	
Double Track Mined (Soft Soil)	Mile	\$ 79,2					\$	
Double Track TBM (<6 Miles)	Mile	\$ 106,6					\$	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,7					\$	
Seismic Chamber (Drill & Blast/Mined) Crossovers	ea	\$ 126,2 \$ 4					\$ \$	
Cut & Cover Double Track Tunnel	ea Mile	\$ 131,2	42,368			0.00	-	
Trench Short	Mile	\$ 78,8				0.00		
Trench Long	Mile	\$ 57,5				0.00	\$	
Mechanical & Electrical for Tunnels	Mile	\$ 11,8					\$	
Retaining Walls	Mile		13,888			0.00	\$	
Containment Walls	Mile		07,456			0.00		
Single Track Cut and Cover Subway	Mile	\$ 131,2					\$	
Four Track Drill & Blast	Mile	\$ 293,7	75,360				\$	
Four Track Mined (Soft Soil)	Mile	\$ 158,4	00,000				\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,2	74,624				\$	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,4				2.5-	\$	
Four Track Cut & Cover Tunnel	Mile	\$ 262,4	92,160			0.00	\$	
Grade Separations								
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,2	84.352				\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea		26,528				\$	
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea		59,680				\$	
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea		29,568				\$	
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea		63,520			0	\$	
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea		93,216			Ğ	\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea		50,816			0	\$	
Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea		71,328				\$	
Street Bridging HSR Trench	ea		98,784				\$	
Minor Crossing Closures	ea		87,040				\$	
	1							

	COST ELEMENTS	UNIT	l	UNIT PRICE		At-	Grade		
Sub	osection 2			Base: 2009		T	Α		
			(3	3rd Quarter)	Start: 450 + 00	End: 671 + 00	4.19	Mile	S
Sub	section Details		1				Quant.		Cost
	ble Track At-Grade (Mile)				Start: 450 + 00	End: 671 + 00	4.19 Miles		
	ble Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
	ıble Track Tunnel (Mile) ıble Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	1	
	r Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
	r Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
	r Track Tunnel (Mile) r Track Trench (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	
	Intermediate Passenger Stations	Each	\$	-	3tart. 0 + 00		0.00 Miles	\$	-
	Terminal Passenger Stations	Each	\$	-				\$	-
	Caltrain Passenger Station - At-Grade	Each		\$15,000,000			1		15,000,000
	Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each		\$15,000,000 \$15,000,000				\$	-
	Caltrain Passenger Station - In Trench	Each		\$15,000,000				\$	-
	Maintenance Facility	Each		123,921,884				\$	-
	Parking - Structures	space						\$	-
5	Parking - At Grade	space	Þ	-				Þ	-
	Rail & Utility Relocation								
	Single Track Relocation (Temporary)	Mile	\$					\$	-
	Single Track Relocation (Permanent) Single Track Removal	Mile	\$					\$	-
	Major Utility Relocations - Dense Urban	Mile Mile	\$					\$	-
	Major Utility Relocations - Urban	Mile	\$					\$	-
	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-
	Major Utility Relocations - Suburban	Mile	\$					\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	=
	ROW (Not Included)								
	ROW required for each segment								
	Dense Urban	Acre	\$					\$	-
	Urban	Acre	\$					\$	-
	Dense Suburban Suburban	Acre Acre	\$					\$	-
	Undeveloped	Acre	\$					\$	-
	ROW required for Temp. Construction Easement								
	Dense Urban	Acre						\$	-
	Urban Dense Suburban	Acre Acre						\$	-
	Suburban	Acre						\$	-
	Undeveloped	Acre						\$	-
	Right-of-Way Required for Stations, Maintenance & Parking Facilities								
	Dense Urban	Acre	\$					\$	-
	Urban Dense Suburban	Acre Acre	\$					\$	-
	Suburban	Acre	\$					\$	
	Undeveloped	Acre	\$					\$	-
	Environmental Mitigation = 3% Line Costs							\$	775,596
	System Elements								
1	Signaling (ATC)	Mile	\$	2,070,000			4.19	\$	8,664,205
	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			4.19	\$	2,260,227
3	Wayside Protection System	Mile	\$	108,000			4.19	\$	452,045
	Electrification Items								
	Traction Power supply	Mile	\$	1,170,000			4.19	\$	4,897,159
	Traction Power Distribution	Mile	\$				4.19	\$	6,215,625
	Subtot	al						\$	49,118,044
	Program Implementation Costs (per screening) Program Implementation Costs							\$	12,525,101
	r rogram imprementation costs								
	Contingencies (per screening) (25%)							\$	12,279,511
	0.11.1.1		<u> </u>						70.0 5
	Subtotal (Parameter)							\$	73,922,656

Subtotal (Rounded) \$ 74,000,000



	COST ELEMENTS	UNIT	UNIT PRICE			rm		
Sul	bsection 2		Base: 2009	Start: 671 + 00	End: 724 + 00	3 1.00.1	Mila	
			(3rd Quarter) Start: 6/1 + 00	End: 724 + 00	1.001	villes	>
	osection Details					Quant.		Cost
	uble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	uble Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	uble Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles 0.00 Miles		
	uble Track Trench (Mile) ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		
	ir Track Construction/Reconstruction At-Grade (while)			Start: 671 + 00	End: 724 + 00	1.00 Miles		
	ir Track Elevated (tille)			Start: 0 + 00	Liid. 724 1 00	0.00 Miles		
	ır Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
	Double Track Section - Total							
	Double Track Section - At Grade	Mile	\$ 2,100,22			0.00		
	Double Track Section - On Structure	Mile	\$ 4,700,16			0.00		
	Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,16			0.00		
4	Double Track Section - In Trench	Mile	\$ 4,700,16	0		0.00	\$	
	Four Track Section - Total							
	Four-track Section - At Grade	Mile	\$ 4,200,44	8		0.50	\$	2,108,179
	Four-Track Section - On Structure	Mile	\$ 9,400,32			0.50		4,717,96
	Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,32			0.00		1,7 7,70
	Four-Track Section - In Trench	Mile	\$ 9,400,32			0.00	\$	
	Single Track - Total			_ [
	Single Track Section - At Grade	Mile	\$ 1,549,31			0.00		
	Single Track Section - On structure	Mile	\$ 2,350,08			0.00		
	Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,08 \$ 2,350,08			0.00		
ŏ	Single Track Section - In Trench	Mile	\$ 2,350,08	0		0.00	>	
9	Freight Double Track - At Grade	Mile	\$ 2,839,55	2		0.00	\$	
	Freight Single Track - At Grade	Mile	\$ 1,549,31			0.00		
							·	
	Earthwork Items							
1	Site Preparation - Undeveloped	Acre	\$ 9,21	6		13.38	\$	123,34
	Total Cut	CY	\$ 6.0	0		0.00	\$	
	Total Fill	CY	\$ 6.0	0		196296.30		1,177,77
	Borrow	CY	\$ 13.0			196296.30		2,551,85
	Spoil	CY	\$ 13.0			0.00		
	Landscape erosion Control	Acre	\$ 6,14			0.00		
	Security Fencing (Both sides of ROW)	Mile	\$ 144,38	4		0.00		102 / 4
8	Special Drainage Facilities	5% Ear	nwork I				\$	192,649
	Structures, Tunnels, Walls							
1	Standard Structure	Mile	\$ 34,972,67	2		0.50	\$	17,552,57
	High Structure	Mile	\$ 40,424,44				\$,,-
3	Long Span Structure	Mile	\$ 61,919,23				\$	
	Waterway Crossing - Primary	Mile	\$ 85,342,20				\$	
	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,40	8			\$	
	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,26				\$	
	Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,31	2			\$	
	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,89				\$	
	Double Track Drill & Blast	Mile	\$ 146,887,68			0.00		
	Double Track Mined (Soft Soil)	Mile	\$ 79,200,00				\$	
	Double Track TBM (<6 Miles)	Mile	\$ 106,637,31					
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,89					
	Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,95				\$	
	Crossovers Cut & Cover Double Track Tunnel	ea Mile	\$ 442,36 \$ 131,246,08			0.00	\$ ¢	
	Trench Short	Mile	\$ 131,246,08			0.00		
	Trench Long	Mile	\$ 78,843,90			0.00	\$	
	Mechanical & Electrical for Tunnels	Mile	\$ 11,848,70				\$	
	Retaining Walls	Mile	\$ 8,613,88			0.50		4,323,25
	Containment Walls	Mile	\$ 5,907,45			0.00		7,020,20
	Single Track Cut and Cover Subway	Mile	\$ 131,246,08			0.00	\$	
	Four Track Drill & Blast	Mile	\$ 293,775,36				\$	
	Four Track Mined (Soft Soil)	Mile	\$ 158,400,00				\$	
	Four Track TBM (<6 Miles)	Mile	\$ 213,274,62					
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,79					
	Four Track Cut & Cover Tunnel	Mile	\$ 262,492,16	0		0.00	\$	
	Crada Sanarations							
1	Grade Separations Peadway Crossing HSD 41 and Peadway Under 2 Tracks (Urban)	00	¢ 12.204.25	,			¢	
I	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,35 \$ 19,926,52			0	\$ \$	
2	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Orban)	ea	\$ 19,920,32			2	\$	5,519,36
	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,739,00				\$	0,017,00
	Roadway Crossing HSR - 4 Lane Roadway Order 2 Tracks (Urban)	ea	\$ 3,563,52				\$	
	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,21				\$	
J	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Juban)	ea	\$ 2,850,81				\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,32				\$	
6		1		i	Ī		*	
	Street Bridging HSR Trench	ea	\$ 1.398 78	4			\$	
7	Street Bridging HSR Trench Minor Crossing Closures	ea ea	\$ 1,398,78 \$ 87,04				\$ \$	

ection 2		1					
		Base: 2009			В		
		(3rd Quarter)	Start: 671 + 00	End: 724 + 00	1.00	Miles	i
ection Details					Quant.		Cost
e Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
e Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
e Track Tunnel (Mile) e Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		
Frack Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Track Elevated (Mile)			Start: 671 + 00	End: 724 + 00	1.00 Miles		
Frack Tunnel (Mile) Frack Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		
termediate Passenger Stations	Each	\$ -	Start: 0 + 00		0.00 Miles	\$	-
erminal Passenger Stations	Each	\$ -				\$	-
altrain Passenger Station - At-Grade	Each	\$15,000,000				\$	-
altrain Passenger Station - On Structure	Each	\$15,000,000				\$	-
altrain Passenger Station - In Tunnel or Subway altrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000				\$	-
aintenance Facility	Each	\$ 123,921,884				\$	-
arking - Structures	space					\$	-
arking - At Grade	space	\$ -				\$	-
ail 9 Utility Polocation							
ail & Utility Relocation ngle Track Relocation (Temporary)	Mile	\$ 2,000,896				\$	_
ngle Track Relocation (Permanent)	Mile	\$ 2,000,896				\$	-
ngle Track Removal	Mile	\$ 130,048				\$	-
ajor Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$	-
ajor Utility Relocations - Urban ajor Utility Relocations - Dense Suburban	Mile	\$ 1,084,416				\$	-
ajor Utility Relocations - Dense Suburban ajor Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896				\$	-
ajor Utility Relocations - Subdiban	Mile	\$ 30,720				\$	-
DW (Not Included) DW required for each segment							
ense Urban	Acre	\$ 2,786,321				\$	-
ban	Acre	\$ 1,371,510				\$	-
ense Suburban	Acre	\$ 908,134				\$	-
uburban	Acre	\$ 208,418				\$	-
ndeveloped DW required for Temp. Construction Easement	Acre	\$ 3,642				\$	-
ense Urban	Acre					\$	-
ban	Acre					\$	-
ense Suburban	Acre					\$	-
uburban adayalanad	Acre					\$	-
ndeveloped ght-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					Þ	-
ense Urban	Acre	\$ 2,786,321				\$	-
ban	Acre	\$ 1,371,510				\$	-
ense Suburban	Acre	\$ 908,134				\$	-
uburban ndeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$	-
nueveloped nvironmental Mitigation = 3% Line Costs	Acre	\$ 3,042				\$	1,148,009
-							
ystem Elements	N 4:1-	¢ 2070.000			1.00	4	2 077 044
gnaling (ATC) ommunications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			1.00 1.00		2,077,841 542,045
ayside Protection System	Mile	\$ 108,000			1.00		108,409
ectrification Items							
action Power Distribution	Mile	\$ 117,000			1.00		117,443
action Power Distribution Subto	Mile	\$ 1,485,000			1.00	\$	1,490,625 43,751,330
rogram Implementation Costs (per screening)	tul					\$	11,156,589
ogram Implementation Costs							
nuting appairs (nor coroning) (250/)						4	10 027 020
ontingencies (per screening) (25%)						\$	10,937,832
ubtotal		1		1		\$	65,845,751

Subtotal (Rounded) \$ 66,000,000



COST ELEMENTS	UNIT UNIT PRICE		Berm			At-Grade (2 Trad	ks)			At-Grade (iduct (2 Tracks)	
Subsection 2	Base: 2009 (3rd	Start: 724 ± 00	C1 End: 775 + 00	0.97 Miles	Start: 77	C2 + 00 End: 843 + 00	1.29 Miles		Start: 775 + 00	Fnd: 843 + 00	2 1.29 M	Miles	Start: 775 + 00		C2 1.29 Mile	s
	Quarter)	Start. 724 + 00							Start. 770 ± 00	LIIU. 043 ± 00			Start. 770 ± 00	LIIU. 043 + 00		
Subsection Details		Start. 0 : 00	Qual		Ost Stort: 77			Cost	Stort, 775 . 00	End: 942 : 00	Quant.	Cost	Stort 0 : 00	End: 0 : 00	Quant.	Cost
Oouble Track At-Grade (Mile) (Three track where noted) Oouble Track Elevated (Mile)		Start: 0 + 00 Start: 724 + 00	End: 0 + 00 0.00 N End: 775 + 00 0.97 N		Start: 779 Start: 0		Miles Miles	}	Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles		Start: 0 + 00 Start: 775 + 00	End: 0 + 00 End: 843 + 00	0.00 Miles 1.29 Miles	
Double Track Elevated (Mile)		Start: 0 + 00	0.00 N		Start: 0		Miles	-	Start: 0 + 00		0.00 Miles		Start: 0 + 00	LIIU. 043 + 00	0.00 Miles	
Double Track Trench (Mile)		Start: 0 + 00	0.00 N		Start: 0		Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)		Start: 0 + 00	End: 0 + 00 0.00 M	Miles	Start: 0		Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)		Start: 0 + 00	End: 0 + 00 0.00 N		Start: 0		Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)		Start: 0 + 00	0.00 N		Start: 0		Miles	-	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile) Single Track At-Grade (Mile)		Start: 0 + 00 Start: 0 + 00	0.00 N		Start: 0 Start: 0		Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track At-Grade (Mile)		Start: 0 + 00	0.00 N 0.00 N		Start: 0		Miles Miles	-	Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Elevated (Mile)		Start: 0 + 00	0.00 N		Start: 0		Miles	-	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Trench (Mile)		Start: 0 + 00	0.00 N		Start: 0		Miles	-	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																
1 Double Track Section - At Grade	Mile \$ 2,100,224			0.00 \$	-		1.29 \$	2,704,834			0.00 \$	-			0.00 \$	-
2 Double Track Section - On Structure	Mile \$ 4,700,160				4,539,927		0.00 \$	-			0.00 \$	-			1.29 \$	6,053,236
3 Double Track Section - In Tunnel or Subway	Mile \$ 4,700,160	1		0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
4 Double Track Section - In Trench	Mile \$ 4,700,160			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
Three Track Section - Total (See note)																
Three-track Section - At Grade	Mile \$ 3,150,336	.1		0.00 \$	-		0.00 \$	-			1.29 \$	4,057,251			0.00 \$	_
Three-Track Section - On Structure	Mile \$ 7,050,240			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
Three-Track Section - In Tunnel or Subway	Mile \$ 7,050,240			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
Three-Track Section - In Trench	Mile \$ 7,050,240			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
Four Track Section - Total	Mil- 6 4.000 110			0.00			0.00				0.00				0.00	
Four-track Section - At Grade Four-Track Section - On Structure	Mile \$ 4,200,448 Mile \$ 9,400,320			0.00 \$ 0.00 \$	=		0.00 \$ 0.00 \$	-			0.00 \$	-			0.00 \$	-
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile \$ 9,400,320			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
Four-Track Section - In Trumer of Subway Four-Track Section - In Trench	Mile \$ 9,400,320			0.00 \$	-		0.00 \$	- []			0.00 \$				0.00 \$	-
1. Sa. Track Social III Honor	νιιο ψ 7,του,υ20			0.00			0.00	- 1			0.00	,			0.00	_
Single Track - Total																
5 Single Track Section - At Grade	Mile \$ 1,549,312			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
6 Single Track Section - On structure	Mile \$ 2,350,080			0.00 \$	=		0.00 \$	-			0.00 \$	-			0.00 \$	-
7 Single Track Section - In Tunnel or Subway	Mile \$ 2,350,080			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
8 Single Track Section - In Trench	Mile \$ 2,350,080			0.00 \$	=		0.00 \$	-			0.00 \$	-			0.00 \$	-
Q Freight Double Track - At Crado	Mile \$ 2,839,552			0.00			0.00				0.00	t t			0.00 ¢	
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile \$ 2,839,552 Mile \$ 1,549,312			0.00 \$ 0.00 \$	-		0.00 \$ 0.00 \$	-			0.00 \$	-			0.00 \$ 0.00 \$	-
Top reigniconingie mack - Acotave	IVIIIC 9 1,349,312			υ.υυ φ	-		υ.υυ φ	-			0.00	-			0.00 \$	-
Earthwork Items																
1 Site Preparation - Undeveloped	Acre \$ 9,216	1		7.61 \$	70,136		10.15 \$	93,514			10.15 \$	93,514			10.15 \$	93,514
2 Total Cut	CY \$ 6.00			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
3 Total Fill	CY \$ 6.00			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
4 Borrow	CY \$ 13.00			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
5 Spoil	CY \$ 13.00			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
6 Landscape erosion Control	Acre \$ 6,144			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
7 Security Fencing (Both sides of ROW)	Mile \$ 144,384 5% Earthwork			0.00 \$	3.507		0.00 \$	4 / 7 /			0.00 \$	5 - 5 4.676			0.00 \$	4 / 7/
8 Special Drainage Facilities	5% Earthwork			\$	3,507		\$	4,676			3	4,6/6			\$	4,676
Structures, Tunnels, Walls																
1 Standard Structure	Mile \$ 34,972,672			\$	=		0.00 \$	-			0.00 \$	-			1.29 \$	45,040,562
2 High Structure	Mile \$ 40,424,448			\$	-		\$	-			\$	-			\$	-
3 Long Span Structure	Mile \$ 61,919,232			\$	-		\$	-			\$	-			\$	-
4 Waterway Crossing - Primary	Mile \$ 85,342,208			\$	-		\$	-			\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile \$ 92,049,408			\$	=		\$	-			\$	-			\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 142,731,264			\$	-		\$	-			\$	-			\$	-
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 106,637,312 Mile \$ 176,720,896			\$	=		\$	-			3	-			\$	-
9 Double Track Drill & Blast	Mile \$ 176,720,896			0.00 \$	-		0.00 \$	-			0.00	-			0.00 \$	-
10 Double Track Mined (Soft Soil)	Mile \$ 79,200,000			\$	-		\$	-			0.00				\$	-
Double Track TBM (<6 Miles)	Mile \$ 106,637,312			Ψ			•				*	,				
Double Track TBM v/3rd Tube (>6 Miles)	Mile \$ 176,720,896															
11 Seismic Chamber (Drill & Blast/Mined)	ea \$ 126,205,952			\$	-		\$	-			\$	-			\$	-
12 Crossovers	ea \$ 442,368			\$	-		\$	-			\$	-			\$	-
13 Cut & Cover Double Track Tunnel	Mile \$ 131,246,080			0.00 \$	=		0.00 \$	-			0.00 \$	-			0.00 \$	-
14 Trench Short (assume cost for 1 track is 60% of unit cost)	Mile \$ 78,843,904			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
15 Trench Long	Mile \$ 57,524,224			\$	=		\$	-			\$	-			\$	-
16 Mechanical & Electrical for Tunnels	Mile \$ 11,848,704			\$	0.220.222		\$	-			200	-			\$ 0.00	-
17 Retaining Walls	Mile \$ 8,613,888 Mile \$ 5,907,456				8,320,233		0.00 \$ 0.00 \$	-			0.00 \$	-			0.00 \$ 0.00 \$	-
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile \$ 5,907,456 Mile \$ 131,246,080			0.00 \$	-		0.00 \$	-			0.00	-			0.00 \$	-
Four Track Cut and Cover Subway	Mile \$ 131,246,080	1		\$	-		\$	-			3	-			\$	-
Four Track Mined (Soft Soil)	Mile \$ 293,775,360 Mile \$ 158,400,000			\$	-		s	- []			3				\$	-
Four Track TBM (<6 Miles)	Mile \$ 213,274,624			"			"	-			1	-				-
Four Track TBM w/3rd Tube (>6 Miles)	Mile \$ 353,441,792															
Four Track Cut & Cover Tunnel	Mile \$ 262,492,160			0.00 \$	-		0.00 \$	-			0.00 \$	-			0.00 \$	-
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352			\$	-		\$	-			\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea \$ 19,926,528 ea \$ 2,759,680			0 \$	=		0 \$	-			1 8	-			0 \$	-
A DOMINION OF THE PROPERTY OF THE AND A STATE OF THE PROPERTY	ta \$ ∠,/59,08U	j	1 l	Þ	-	i I	υ \$	-]			U \$	-	l l		1 3	-

	UNIT	UNIT PRICE			erm				(2 Tracks)				e (3 Tracks)				duct (2 Tracks)	
Subsection 2		Base: 2009 (3rd Quarter)	Start: 724 + 00	End: 775 + 00	C1 0.97	Miles	Start: 775 + 00	End: 843 + 00	C2 1.29 l	Miles	Start: 775 + 00	End: 843 + 00	C2 1.29	Miles	Start: 775 + 00	End: 843 + 00	C2 1.29	Miles
Subsection Details		•			Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) (Three track where noted)			Start: 0 + 00		0.00 Miles			End: 843 + 00	1.29 Miles			End: 843 + 00	1.29 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 724 + 00	End: 775 + 00	0.97 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles 0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea ea ea ea ea	\$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784 \$ 87,040				\$ - \$ - \$ - \$ - \$ - \$ - \$ -			2 3 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	7,127,040 7,127,040 7,127,040 7,127,040 7,127,040 7,127,040 7,127,040			2 0	\$ 7,127,040 \$ - \$ - \$ - \$ 5 \$ 87,040			0	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
Building Items 1 Intermediate Passenger Stations 2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench 3 Maintenance Facility 4 Parking - Structures 5 Parking - At Grade	Each Each Each Each Each Each space	\$ - \$ \$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$ 123,921,884 \$ - \$ -			1	\$ - \$ 15,000,000 \$ - \$ - \$ - \$ - \$ - \$ -			0 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3				0	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			0	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
Rail & Utility Relocation 1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent) 3 Single Track Removal 4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile Mile Mile Mile Mile Mile	\$ 2,000,896 \$ 2,000,896 \$ 130,048 \$ 1,548,288 \$ 1,084,416 \$ 775,168 \$ 464,896 \$ 30,720				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9					\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
ROW (Not Included) ROW required for each segment		A 0.707.001																
1 Dense Urban 2 Urban 3 Dense Suburban 4 Suburban 5 Undeveloped ROW required for Temp. Construction Easement 1 Dense Urban 2 Urban	Acre Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418 \$ 3,642				\$ - \$ - \$ - \$ -			3 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9					\$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ -
2 Urban 3 Dense Suburban 4 Suburban 5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre Acre Acre Acre Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418 \$ 3,642				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5 - \$ 6 - \$ 7 - \$ 8 - \$ 7 - \$ 8 - \$ 7 - \$ 8 - \$ 7 - 5								\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile Mile	\$ 2,070,000 \$ 540,000 \$ 108,000			0.97 0.97 0.97				1.29 1.29 1.29	695,455			1.29 1.29 1.29	\$ 695,455			1.29 1.29 1.29	\$ 695,455
Electrification Items 1 Traction Power supply 2 Traction Power Distribution Subtotal	Mile Mile	\$ 1,170,000 \$ 1,485,000			0.97 0.97	\$ 1,434,375 \$ 33,961,646			1.29 \$ 1.29 \$	1,912,500 17,327,041			1.29 1.29	\$ 1,912,500 \$ 18,630,379			1.29 2.52	\$ 3,742,200 \$ 61,477,221
Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%)						\$ 8,660,220				4,418,395 4,221,760				\$ 4,750,747				\$ 15,676,691
Contingencies (per screening) (25%)						\$ 8,490,411			\$	4,331,760				\$ 4,657,595				\$ 15,369,305
Subtotal						\$ 51,112,277			5	26,077,196				\$ 28,038,720				\$ 92,523,217
Subtotal (Rounded) Note: unit price for three track is interpolated from double and four tracks					l	\$ 51,000,000			(\$ 26,000,000				\$ 28,000,000				\$ 93,000,000

COST ELEMENTS	UNIT UNIT PRICE	Elevated Viaduct	(3 Tracks)				2 Tracks)			Berm (3					nch (1 Track)	
Subsection 2	Base: 2009 (3rd Quarter)	C2: 775 + 00 End: 843 + 00	1.29 Mi	les	Start: 775 + 00		C2 1.29 Mil	es	Start: 775 + 00	End: 843 + 00	2 1.29 Mile	s St	art: 775 + 00	End: 843 + 00	C2 1.29 N	1iles
Subsection Details	Quarter)		Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) (Three track where noted)		t: 0 + 00 End: 0 + 00 0	.00 Miles	5050	Start: 0 + 00	End: 0 + 00	0.00 Miles	5551	Start: 0 + 00	End: 0 + 00	0.00 Miles	S	Start: 0 + 00	End: 0 + 00	0.00 Miles	3031
Double Track Elevated (Mile) Double Track Tunnel (Mile)			.00 Miles .00 Miles	•	Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Trench (Mile)	Sta	t: 0 + 00	.00 Miles	•	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			.00 Miles	•	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			.29 Miles .00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)	Sta	t: 0 + 00	.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile) Single Track Elevated (Mile)			.00 Miles .00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Single Track Tunnel (Mile)			.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Trench (Mile) Double Track Section - Total	Sta	t: 0 + 00 0.	.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	St	art: 775 + 00	End: 843 + 00	1.29 Miles	
1 Double Track Section - At Grade	Mile \$ 2,100,224		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
2 Double Track Section - On Structure	Mile \$ 4,700,160		0.00 \$	-			1.29 \$	6,053,236			0.00 \$	-			0.00 \$	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile \$ 4,700,160 Mile \$ 4,700,160		0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
4 Double Hack Section - In Hench	Wille \$ 4,700,100		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
Three Track Section - Total (See note)	Mil- 6 2 150 224		0.00 ¢				0.00				0.00				0.00	
Three-track Section - At Grade Three-Track Section - On Structure	Mile \$ 3,150,336 Mile \$ 7,050,240		0.00 \$ 1.29 \$	9,079,855			0.00 \$ 0.00 \$	-			0.00 \$ 1.29 \$	9,079,855			0.00 \$ 0.00 \$	- -
Three-Track Section - In Tunnel or Subway	Mile \$ 7,050,240		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	=
Three-Track Section - In Trench	Mile \$ 7,050,240		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
Four Track Section - Total																
Four-track Section - At Grade	Mile \$ 4,200,448		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	=
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile \$ 9,400,320 Mile \$ 9,400,320		0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$	-
Four-Track Section - In Trench	Mile \$ 9,400,320		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
5 Single Track Section - At Grade	Mile \$ 1,549,312		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
6 Single Track Section - On structure	Mile \$ 2,350,080		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 Miles \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile \$ 2,350,080 Mile \$ 2,350,080		0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0 \$ 1.29 \$	3,026,618
															1.27	0,020,010
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile \$ 2,839,552 Mile \$ 1,549,312		0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0 \$	-
Top reight Jillighe Hack - At Glade	φ 1,047,512		0.00[\$	-			0.00 \$	-			0.00 \$	-				-
Earthwork Items				460				00				450.05-				
1 Site Preparation - Undeveloped 2 Total Cut	Acre \$ 9,216 CY \$ 6.00		17.17 \$ 0.00 \$	158,255			10.15 \$ 1385185.19 \$	93,514 8,311,111			17.17 \$ 0.00 \$	158,255			10.15 \$ 0.00 \$	
3 Total Fill	CY \$ 6.00		0.00 \$	-			503703.70 \$	3,022,222			0.00 \$	-			0.00 \$	-
4 Borrow 5 Spoil	CY \$ 13.00 CY \$ 13.00		0.00 \$ 0.00 \$	-			0.00 \$ 881481.48 \$	- 11,459,259			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-
6 Landscape erosion Control	Acre \$ 6,144		0.00 \$	-			0.00 \$	11,437,237			0.00 \$	-			0.00 \$	-
7 Security Fencing (Both sides of ROW)	Mile \$ 144,384		0.00 \$	7.010			0.00 \$	- 1 1 1 1 0 0 5			0.00 \$	- 7.040			0.00 \$	
8 Special Drainage Facilities	5% Earthwork		\$	7,913			\$	1,144,305			\$	7,913			\$	4,676
Structures, Tunnels, Walls																
1 Standard Structure 2 High Structure	Mile \$ 34,972,672 Mile \$ 40,424,448		1.29 \$	45,040,562			0.00 \$	-			1.29 \$	45,040,562			0.00 \$	-
3 Long Span Structure	Mile \$ 61,919,232		\$	-			\$	-			\$	-			\$	
4 Waterway Crossing - Primary	Mile \$ 85,342,208		\$	-			\$	-			\$	-			\$	=
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 92,049,408 Mile \$ 142,731,264		\$	-			\$	-			\$	-			\$	·
7 Twin Single Track TBM (<6 Miles)	Mile \$ 106,637,312		\$	-			\$	-			\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile \$ 176,720,896 Mile \$ 146,887,680		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
10 Double Track Mined (Soft Soil)	Mile \$ 79,200,000		\$	-			\$	-			\$	-			\$	- -
Double Track TBM (<6 Miles)	Mile \$ 106,637,312 Mile \$ 176,720,896															
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile \$ 176,720,896 ea \$ 126,205,952		\$	-			\$	-			\$	_			\$	
12 Crossovers	ea \$ 442,368		\$	-			\$	-			\$	-			\$	-
13 Cut & Cover Double Track Tunnel 14 Trench Short (assume cost for 1 track is 60% of unit cost)	Mile \$ 131,246,080 Mile \$ 78,843,904		0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 1.29 \$	
15 Trench Long	Mile \$ 57,524,224		\$	-			\$	-			\$	-			0.00 \$	-
16 Mechanical & Electrical for Tunnels	Mile \$ 11,848,704		\$	-			\$	-			\$	-			0.00 \$	-
17 Retaining Walls 18 Containment Walls	Mile \$ 8,613,888 Mile \$ 5,907,456		0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			1.29 \$ 1.29 \$	11,093,644 7,608,087
19 Single Track Cut and Cover Subway	Mile \$ 131,246,080		\$	-			\$	-			\$	-			\$	
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile \$ 293,775,360 Mile \$ 158,400,000		\$	-			\$	-			\$	-			\$	-
Four Track Mined (Soit Soil) Four Track TBM (<6 Miles)	Mile \$ 213,274,624		\$	-			3	-			\$	-				-
Four Track TBM w/3rd Tube (>6 Miles)	Mile \$ 353,441,792		_ [_ [.					
Four Track Cut & Cover Tunnel	Mile \$ 262,492,160		0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352		\$	-			\$	-			\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea \$ 19,926,528 ea \$ 2,759,680		U \$	-			U \$	-			0 \$	-			\$ \$	-
Epitodanay orosoning more in Earlie Rodaway onucli 4 Hacks (Japanball)	οα ψ 2,737,000	ı l	I a	- 1			Ιψ	- 1	ı I	1	ĮΨ	- 1	I	I		

	UNIT I	UNIT PRICE			duct (3 Tracks)				2 Tracks)			,	Tracks)			Open Trer	nch (1 Track)	
Subsection 2	Ва	ase: 2009 (3rd	Start: 775 + 00	End: 843 + 00	C2	9 Miles	Start: 775 + 00		C2 1.29 Mile:	S	Start: 775 + 00		1 29	Miles	Start: 775 + 00	End: 843 + 00	C2	9 Miles
		Quarter)	Otal 1: 770 1 00	End. 010 1 00			Start. 770 1 00	Liid. 010 1 00			Start. 770 1 00	Elia. 010 1 00			Start: 770 1 00	Life. 010 1 00		
Subsection Details Double Track At-Grade (Mile) (Three track where noted)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile) Single Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Single Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Trench (Mile) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea \$	2,029,568	Start: 0 + 00		0.00 Miles	9	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	¢	Start: 775 + 00	End: 843 + 00	1.29 Miles	e -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea \$ ea \$ ea \$ ea \$ \$	3,563,520 3,593,216 2,850,816 3,171,328 1,398,784 87,040			0	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	-				\$ - \$ - \$ - \$ - \$ - \$ -			0	\$ - \$ - \$ - \$ - \$ - \$ 87,040
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench 3 Maintenance Facility 4 Parking - Structures	Each \$ Each \$ Each Each Each Each Each S Each \$ Each Each \$ Each Each \$ Each Each Each \$ Each Each Each Each Each Each Each Each	\$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 123,921,884			0	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			\$ 0 \$ \$ \$ \$ \$	- - - - - - -			0	\$			1	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal 4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile \$	2,000,896 2,000,896 130,048 1,548,288 1,084,416 775,168 464,896 30,720				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			\$ \$ \$ \$ \$	- - - - - -				\$				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
2 Urban	Acre \$	2,786,321 1,371,510				\$			\$					\$ - \$ -				\$ - \$ -
4 Suburban 5 Undeveloped ROW required for Temp. Construction Easement	Acre \$ Acre \$ Acre \$ Acre	908,134 208,418 3,642				\$	-		\$ \$	- -				\$ - \$ - \$ -				\$ - \$ -
2 Urban // Dense Suburban // Suburban // Suburban // Suburban // Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities // Dense Urban // Urban // Urban // Dense Suburban // Dense Subu	Acre Acre SAcre SA	2,786,321 1,371,510 908,134				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			\$ \$ \$ \$ \$	- - - -				\$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ - \$ - \$ -
	Acre \$ Acre \$	208,418 3,642				\$ \$ \$ 1,628,598	-		\$ \$ \$	902,509				\$ - \$ - \$ 1,628,598				\$ - \$ 2,485,152
2 Communications (w/ Fiber Optic Backbone)	Mile \$ Mile \$ Mile \$	2,070,000 540,000 108,000			1.29 1.29 1.29	\$ 695,455	5		1.29 \$ 1.29 \$ 1.29 \$	2,665,909 695,455 139,091			1.29 1.29 1.29	\$ 695,455			1.29 1.29	
2 Traction Power Distribution Subtotal	Mile \$	1,170,000 1,485,000			1.29 2.52	\$ 3,742,200 \$ 64,664,654	1		1.29 \$ 1.29 \$ \$	1,506,818 1,912,500 37,905,931			1.29 1.29	\$ 1,912,500 \$ 62,834,954			1.29	\$ - \$ 88,070,612
Program Implementation Costs (per screening) Program Implementation Costs						\$ 16,489,487			\$	9,666,012				\$ 16,022,913				\$ 22,458,006
Contingencies (per screening) (25%)						\$ 16,166,164	1		\$	9,476,483				\$ 15,708,739				\$ 22,017,653
Subtotal				<u>I</u>	I	\$ 97,320,305	i	<u>I</u>	\$	57,048,425				\$ 94,566,607		I	<u>I</u>	\$ 132,546,270
Subtotal (Rounded) Note: unit price for three track is interpolated from double and four tracks						\$ 97,000,000			\$	57,000,000				\$ 95,000,000				\$ 133,000,000

COST ELEMENTS	UNIT	UNIT PRICE			ch (2 Tracks)			Covered Trencl	h (1 Track) (HST	only)		Covered Trenc	h (2 Tracks) (HST only)	
Subsection 2		Base: 2009 (3rd	Start: 775 + 00	End: 843 + 00	C2 1.29 Mil	les	Start: 775 + 00	End: 843 + 00	C2	.29 Miles	Start: 775 + 00	End: 843 + 00	C2	les
		Quarter)	Start. 773 + 00	L110. 043 + 00			Start. 775 + 00	L11u. 043 + 00			Start. 775 + 00	LIIU. 043 + 00		
Subsection Details Double Track At-Grade (Mile) (Three track where noted)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End 042 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 775 + 00	End: 843 + 00	0.00 Miles 1.29 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 775 + 00 Start: 0 + 00	End: 843 + 00	1.29 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Trench (Mile)		•	Start: 0 + 00		0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00 \$	_			0.00	\$			0.00 \$	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00 \$	-			0.00				0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00 \$	- / 052.22/			0.00	-			1.29 \$	6,053,236
4 Double Track Section - In Trench	Mile	\$ 4,700,160)		1.29 \$	6,053,236			0.00	-			0.00 \$	-
Three Track Section - Total (See note)														
Three-track Section - At Grade Three-Track Section - On Structure	Mile Mile	\$ 3,150,336 \$ 7,050,246			0.00 \$ 0.00 \$	=			0.00 0.00				0.00 \$ 0.00 \$	-
Three-Track Section - In Tunnel or Subway	Mile	\$ 7,050,240			0.00 \$	-			0.00				0.00 \$	-
Three-Track Section - In Trench	Mile	\$ 7,050,240			0.00 \$	-			0.00	-			0.00 \$	-
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00 \$	-			0.00				0.00 \$	-
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 \$	=			0.00 0.00				0.00 \$ 0.00 \$	-
Four-Track Section - In Trumer of Subway Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00 \$	-			0.00	\$ -			0.00 \$	-
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312	,		0 \$	_			0.00	\$ -			0 \$	_
6 Single Track Section - On structure	Mile	\$ 2,350,080)		0 \$	-			0	\$ -			0 \$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080 \$ 2,350,080			0 \$	-			0	\$ -			0 \$	-
8 Single Track Section - In Trench	Mile	2,000,000			0 3	-			1.29	\$ 3,026,618			0 3	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0 \$	-			0	-			0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312	·		0 \$	-			0	-			0 \$	-
Earthwork Items														
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			27.32 \$ 0.00 \$	251,769			10.15 0.00				17.17 \$ 0.00 \$	158,255
3 Total Fill	CY	\$ 6.00)		0.00 \$	-			0.00	\$ -			0.00 \$	-
4 Borrow	CY	\$ 13.00)		0.00 \$	-			0.00	\$ -			0.00 \$	-
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 13.00 \$ 6,144			0.00 \$ 0.00 \$	-			0.00 0.00	\$ -			0.00 \$ 0.00 \$	-
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00 \$	-			0.00				0.00 \$	-
8 Special Drainage Facilities	5% Ea	rthwork I			\$	12,588				\$ 4,676			\$	7,913
Structures, Tunnels, Walls														
1 Standard Structure	Mile	\$ 34,972,672			0.00 \$	-			0.00	-			0.00 \$	-
2 High Structure 3 Long Span Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232			\$	-				\$ -			\$	-
4 Waterway Crossing - Primary	Mile	\$ 85,342,208	3		\$	-				\$ -			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264			\$	-				-			\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$	-				\$ -			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896			\$	Ē			0.00	-			\$ \$	100 172 52
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile Mile	\$ 146,887,680 \$ 79,200,000			0.00 \$	-			0.00	\$ -			1.29 \$	189,173,527 -
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312	2							•				
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952								•			•	
12 Crossovers	ea	\$ 442,368			\$	-				\$ -			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00 \$	101 541 202			0.00				0.00 \$	-
14 Trench Short (assume cost for 1 track is 60% of unit cost) 15 Trench Long	Mile Mile	\$ 78,843,904 \$ 57,524,224			1.29 \$	101,541,392			0.00	\$ -			0.00 \$	
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704	1		\$	-			1.29				1.29 \$	15,259,695
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			1.29 \$ 1.29 \$	11,093,644 7,608,087			0.00 0.00				0.00 \$ 0.00 \$	
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			1.29 \$	1,000,007			1.29				\$	
Four Track Drill & Blast	Mile	\$ 293,775,360)		\$	-				\$			\$	
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624	2		\$	-				-			\$	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792												
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160)		0.00 \$	-			0.00	\$ -			0.00 \$	-
Grade Separations														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			\$	-				\$ -			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680			\$	-				\$ -			\$	-
2 - Freezendy crossing from 2 Earle Readway Chack 4 Hacks (Suburbari)	Ca	I Ψ 2,137,000	' 1	I	ı I.º	-	I	ı	I	· *	1	I	I I V	=

March Marc	COST ELEMENTS	UNIT	UNIT PRICE		<u> </u>	ch (2 Tracks)			Covered Trend	ch (1 Track) (HST onl	y)		Covered Trencl	h (2 Tracks) (HST	only)
Second Process Seco	Subsection 2			Start: 775 + 00			9 Miles	Start: 775 + 00	End: 843 + 00	C2	Miles	Start: 775 + 00	End: 843 + 00	C2	.29 Miles
See See See See See See See See See Se	Subsection Details		Quarter)			Quant	Cost			Quant	Cost			Quant	Cost
Substitute Sub	Double Track At-Grade (Mile) (Three track where noted)				End: 0 + 00	0.00 Miles	COST		End: 0 + 00	0.00 Miles	COST		End: 0 + 00	0.00 Miles	COST
Barbor B							4						End. 942 : 00		
Control Plant					End: 843 + 00		1						L110. 043 + 00		
Note The Section of Mark 1985								Start: 0 + 00	End: 0 + 00						
					End: 0 + 00		1	Start: 0 + 00	End: 0 + 00						
Signate Part	Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Signature Profession Prof							-		End: 0 + 00						
Security Control Pursum States (Controlled)	Single Track Tunnel (Mile)			Start: 0 + 00]					Start: 0 + 00		0.00 Miles	
Processing Consoly IEST - Liver Transact Control		ea	\$ 2,029,568	Start: 0 + 00		0.00 Miles	\$.	Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 0 + 00		0.00 Miles	\$ -
Immediate Passage States S	4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea ea ea	\$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784			C 1	\$ - \$ - \$ - \$ - \$ - \$ 87,040			0 4	- - - - -			0	\$ \$ \$ \$ \$ \$
Spring France Revision (Percenyary)	Intermediate Passenger Stations Terminal Passenger Stations Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench Maintenance Facility Parking - Structures	Each Each Each Each Each Each space	\$ 15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$ 123,921,884 \$ -			1	\$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			\$ 1 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - - - - - -			1	\$ - \$ - \$ 5
COV required for each segment	Single Track Relocation (Temporary) Single Track Relocation (Permanent) Single Track Removal Major Utility Relocations - Dense Urban Major Utility Relocations - Urban Major Utility Relocations - Dense Suburban Major Utility Relocations - Suburban	Mile Mile Mile Mile Mile	\$ 2,000,896 \$ 130,048 \$ 1,548,288 \$ 1,084,416 \$ 775,168 \$ 464,896				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			\$ \$ \$ \$ \$ \$	- - - - -				\$ - \$ - \$ - \$ - \$ - \$ - \$ -
3 Dense Suburban Acre	ROW required for each segment Dense Urban Urban Dense Suburban Suburban Suburban Undeveloped ROW required for Temp. Construction Easement Dense Urban	Acre Acre Acre Acre	\$ 1,371,510 \$ 908,134 \$ 208,418				\$ - \$ - \$ - \$ - \$ -			\$ \$ \$ \$ \$	- - - - -				\$ - \$ - \$ - \$ - \$ -
1 Signaling (ATC)	3 Dense Suburban 4 Suburban 5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped	Acre Acre Acre Acre Acre Acre	\$ 1,371,510 \$ 908,134 \$ 208,418				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - - - - - 5,622,406				\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -
1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Subtotal Program Implementation Costs Subtotal Program Implementation Costs Subtotal Program Implementation Costs Subtotal Program Implementation Costs (per screening) Program Implementation Costs Subtotal Mile \$ 1,170,000 \$ 1.29 \$ 1,912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ 1.912,500 \$ \$ \$ 1.912,500 \$ \$ 1.91	1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000							1.29 \$				1.29	\$ 139,091
Program Implementation Costs	1 Traction Power supply 2 Traction Power Distribution Sut	Mile				1.29	\$ - \$ 133,194,234			1.29 \$	- 195,782,997			1.29	\$ - \$ 219,719,250
Contingencies (per screening) (25%) \$ 33,298,558 \$ 48,945,749 \$	Program Implementation Costs									\$					\$ 56,028,409
	Contingencies (per screening) (25%)						\$ 33,298,558			\$	48,945,749				\$ 54,929,812
Subtotal \$ 200,457,322 \$ 294,653,410 \$	Subtotal			1	<u>I</u>	<u> </u>	\$ 200.457.322		<u>I</u>	S	294.653.410]		\$ 330,677,471
Subtotal (Rounded) \$ 200,000,000 \$ 295,000,000 \$												<u> </u>			

COST ELEMENTS	UNIT UNIT PRICE		At-Grade ((2 Tracks)			At-Grade	(3 Tracks)			Open Trench (H	ST only) (1 Track)			Open Trench (HS1	T only) (2 Tracks)	
Subsection 2	Base: 2009 (3rd Quarter)		Γ.									 D					
	Qualter)	Start: 843 + 00	End: 905 + 00	1.17 Mi	les	Start: 843 + 00	End: 905 + 00	1.17 N	liles	Start: 843 + 00	End: 905 + 00	1.17 N	Miles	Start: 843 + 00	End: 905 + 00	1.17 M	iles
Subsection Details				Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)		Start: 843 + 00 Start: 0 + 00	End: 905 + 00	1.17 Miles 0.00 Miles		Start: 843 + 00 Start: 0 + 00	End: 905 + 00	1.17 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 843 + 00 Start: 0 + 00	End: 905 + 00 End: 0 + 00	1.17 Miles 0.00 Miles	
Four Track Elevated (Mile)		Start: 0 + 00	Liiu. 0 + 00	0.00 Miles		Start: 0 + 00	Liiu. 0 + 00	0.00 Miles		Start: 0 + 00	Liiu. 0 + 00	0.00 Miles		Start: 0 + 00	L11d. 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Single Track At-Grade (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	E110. U + 00	0.00 Miles		Start: 0 + 00	E110. 0 + 00	0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile \$ 2,100,224			1.17 \$	2,466,172			0.00	\$ -			0.00	\$ -			0.00 \$	_
2 Double Track Section - On Structure	Mile \$ 4,700,160			0.00 \$	-			0.00	\$ -			0.00	\$ -			0.00 \$	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile \$ 4,700,160 Mile \$ 4,700,160			0.00 \$ 0.00 \$	-			0.00 0.00	\$ - \$ -			0.00				0.00 \$ 1.2 \$	5,519,127
	17,700,100			0.00				0.00	Ψ			0.00	*			1.2	0,017,127
Three Track Section - Total (See note) Three-track Section - At Grade	Mile \$ 3,150,336			0.00 \$	_			1.17	\$ 3,699,258			0.00	\$ -			0.00 \$	
Three-Track Section - On Structure	Mile \$ 7,050,240			0.00 \$	-			0.00	\$ -			0.00	\$ -			0.00 \$	-
Three-Track Section - In Tunnel or Subway Three-Track Section - In Trench	Mile \$ 7,050,240 Mile \$ 7,050,240			0.00 \$ 0.00 \$	=			0.00 0.00				0.00				0.00 \$ 0.00 \$	=
	7,030,240			0.00	-			0.00	*			0.00	·			0.00	
Four Track Section - Total Four-track Section - At Grade	Mile \$ 4,200,448			0.00 \$	-			0.00	\$ -			0.00	\$ -			0.00 \$	-
Four-Track Section - On Structure	Mile \$ 9,400,320			0 \$	-			0	\$ -			0	\$ -			0 \$	-
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile \$ 9,400,320 Mile \$ 9,400,320			0 \$	-			0	\$ - \$ -			0.00	*			0 \$	-
																,	
Single Track - Total 5 Single Track Section - At Grade	Mile \$ 1,549,312			0 \$	-			0	\$ -			0 :	\$ -			0 \$	-
6 Single Track Section - On structure	Mile \$ 2,350,080			0 \$	-			0	\$ -			0	-			0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile \$ 2,350,080 Mile \$ 2,350,080			0 \$	-			0	\$ - \$ -			1.2	\$ 2,759,564			0 \$	-
									dt.				,] *	
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile \$ 2,839,552 Mile \$ 1,549,312			0 \$	-			0	\$ - \$			0 :	\$ -			0 \$	-
Earthwork Items 1 Site Preparation - Undeveloped	Acre \$ 9,216			9.25 \$	85,263			15.66	\$ 144,291			7.12	\$ 65,587			9.25 \$	85,263
2 Total Cut	CY \$ 6.00			0.00 \$				0.00	\$ -			0.00	\$ -			0.00 \$	-
3 Total Fill 4 Borrow	CY \$ 6.00 CY \$ 13.00			0.00 \$ 0.00 \$	-			0.00 0.00	\$ - \$ -			0.00				0.00 \$ 0.00 \$	-
5 Spoil	CY \$ 13.00			0.00 \$	-			0.00				0.00	\$ -			0.00 \$	-
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre \$ 6,144 Mile \$ 144,384			0.00 \$ 0.00 \$				0.00 0.00	\$ -			0.00	\$ -			0.00 \$ 0.00 \$	
8 Special Drainage Facilities	5% Earthwork			\$	4,263				\$ 7,215			!	\$ 3,279			\$	4,263
Structures, Tunnels, Walls																	
1 Standard Structure 2 High Structure	Mile \$ 34,972,672 Mile \$ 40,424,448			0.00 \$	-			0.00	\$ -			0.00	\$ -			0.00 \$	-
3 Long Span Structure	Mile \$ 61,919,232			\$	-				\$ -				\$ -			\$	-
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile \$ 85,342,208 Mile \$ 92,049,408			\$	-				\$ -				\$ -			\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 142,731,264			\$	=				\$ -				\$ -			\$	-
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 106,637,312 Mile \$ 176,720,896			\$	-				\$ -				\$ - \$			\$	-
9 Double Track Drill & Blast	Mile \$ 146,887,680			0.00	-			0.00	\$ -			0.00	\$ -			0.00 \$	-
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile \$ 79,200,000 Mile \$ 106,637,312			\$	-				\$ -			!	-			\$	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 176,720,896																
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea \$ 126,205,952 ea \$ 442,368			\$	-				\$ - \$				\$ - \$			\$	-
13 Cut & Cover Double Track Tunnel	Mile \$ 131,246,080			0.00 \$				0.00				0.00				0.00 \$	-
14 Trench Short 15 Trench Long	Mile \$ 78,843,904 Mile \$ 57,524,224			0.00 \$	-			0.00	\$ - \$			0.00	\$ - \$ -			1.17 \$	92,581,857
16 Mechanical & Electrical for Tunnels	Mile \$ 11,848,704			\$	-				\$ -							\$	-
17 Retaining Walls 18 Containment Walls	Mile \$ 8,613,888 Mile \$ 5,907,456			0.00 \$ 0.00 \$				0.00 0.00				1.17 1.17				0.00 \$ 0.00 \$	-
19 Single Track Cut and Cover Subway	Mile \$ 131,246,080			\$	=			0.00	\$ -			1.17	\$ -			\$	-
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile \$ 293,775,360 Mile \$ 158,400,000			\$	-				\$ - \$ -				\$ - \$ -			\$	-
Four Track TBM (<6 Miles)	Mile \$ 213,274,624			Ψ					•								
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile \$ 353,441,792 Mile \$ 262,492,160			0.00 \$	-			0.00	\$ -			0.00	\$ -			0.00 \$	-
	¥ 202,172,100			0.00				0.00	Ŧ			0.00	,			0.00	
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352			\$	-				\$ -				\$ -			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea \$ 19,926,528			\$	-				\$ -				\$ -			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea \$ 2,759,680	I	l l	\$	-	l	I	ı I	-	l] :	-		ı l	\$	-

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	(2 Tracks)		At-Grade	e (3 Tracks)			Open Trench (H	IST only) (1 Track	()		Open Trench (H	ST only) (2 Track	s)
Subsection 2		Base: 2009 (3rd Quarter)			D			D				D				D	
		Qual lei)	Start: 843 + 00	End: 905 + 00	1.17	Miles	Start: 843 + 00 End: 905 + 00	<u> </u>	Miles	Start: 843 + 00	End: 905 + 00	1.17	Miles	Start: 843 + 00	End: 905 + 00	1.17	Miles
Subsection Details					Quant.	Cost		Quant.	Cost			Quant.	Cost	1		Quant.	Cost
Double Track At-Grade (Mile)			Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00 End: 905 + 00	1.17 Miles	1	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	2230
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Tunner (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	_	Start: 0 + 00		0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	_	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Turiner (Mile) Single Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00		0.00 Miles	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -			\$ -				\$	-			\$
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,563,520 \$ 3,593,216			0	\$ -							\$	-			\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)		\$ 2,850,816				\$ -			\$ -				\$				\$
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -			\$ -				\$	-			\$
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040			1	\$ 87,040			\$ - 1 \$ 87,040			0	\$ 87,040	-		0	\$ 07.0
Olivinioi Ciussiiig Ciusures	еа	φ 87,040				φ 67,U4U			φ 87,040			'	ψ 87,040	<u>'</u>		'	\$ 87,04
Building Items						_							_				_
1 Intermediate Passenger Stations 1 Intermediate Passenger Stations (Millbrae)	Each Each	\$ 12,562,617						0.5	\$ 6,281,309			0.5	\$ 6,281,309			1	\$ 12,562,61 ⁻¹
2 Terminal Passenger Stations	Each	\$ -				\$ -		0.5	\$ 0,201,309			0.5	\$ 0,201,309	,		'	\$ 12,502,01
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			0	\$ -		0.5	5 \$ 7,500,000				\$				\$
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each	\$15,000,000 \$15,000,000							\$ -				\$				\$
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -			\$				\$				\$
3 Maintenance Facility	Each	\$ 123,921,884				\$ -			\$ -				\$	-			\$
4 Parking - Structures 5 Parking - At Grade	space space	\$ - \$				\$ -			\$ -				\$				\$
	space	•				-			Ψ -								*
Rail & Utility Relocation						_											_
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896							\$ -				\$	-			\$
3 Single Track Renoval	Mile	\$ 2,000,896				\$ -			\$				\$				\$
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -			\$ -				\$	-			\$
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168							-				\$	-			\$
7 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168 \$ 464,896				\$ -			\$ -				\$	-			\$
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -			\$ -				\$				\$
ROW (Not Included)																	
ROW required for each segment																	
1 Dense Urban	Acre	\$ 2,786,321				\$ -			\$ -				\$	-			\$
2 Urban 3 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -			\$ -				\$				\$
3 Dense Suburban 4 Suburban	Acre	\$ 908,134 \$ 208,418				\$ -			\$ -				\$				\$
5 Undeveloped	Acre	\$ 3,642				\$ -			\$ -				\$				\$
ROW required for Temp. Construction Easement	A 0.r -					¢			•				¢				¢
1 Dense Urban 2 Urban	Acre Acre					\$ -			\$				\$				\$
3 Dense Suburban	Acre					\$ -			\$ -				\$				\$
4 Suburban	Acre					\$ -			\$ -				\$				\$
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					-			\$ -				\$				\$
6 Dense Urban	Acre	\$ 2,786,321				\$ -			\$ -				\$				\$
7 Urban	Acre	\$ 1,371,510				\$ -			\$ -				\$				\$
8 Dense Suburban 9 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ -			\$				\$				\$
10 Undeveloped	Acre	\$ 3,642				\$ -			\$ -				\$				\$
Environmental Mitigation = 3% Line Costs						\$ 79,282			\$ 531,573				\$ 787,451				\$ 3,325,205
System Elements																	
1 Signaling (ATC)	Mile	\$ 2,070,000			1.17			1.17				1.17				1.17	
2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 540,000 \$ 108,000			1.17 1.17			1.17 1.17				1.17 1.17				1.17 1.17	
3 Wayside Protection System	wille	φ 108,000			1.17	120,818 پ		1.17	, φ 120,818			1.17	120,818	<u>'</u>		1.17	φ 120,81
Electrification Items																	
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			1.17 1.17			1.17 1.17				1.17 1.17				1.17 1.17	\$ 1,373,86 \$ 1,743,75
Z TI GOROTTI OWGI DISHIDUHUTI	wille	ψ 1,400,000			1.17	\$ 1,743,750		1.17	\$ 1,743,750			1.17	\$ 1,743,750			1.17	\$ 1,743,75 \$ 120,474,57
Program Implementation Costs (per screening)						\$ 2,302,962			\$ 6,262,772				\$ 8,502,978				\$ 30,721,01
Program Implementation Costs																	
Contingencies (per screening) (25%)						\$ 2,257,806			\$ 6,139,973				\$ 8,336,253	3			\$ 30,118,64
3 4 5 3/4 5/																	
Subtotal						\$ 13,591,993			\$ 36,962,635				\$ 50,184,243				\$ 181,314,23
Subtotal (Rounded)						\$ 14,000,000			\$ 37,000,000				\$ 50,000,000				\$ 181,000,00

COST ELEMENTS	UNIT	UNIT PRICE		Covered Trench (HST only) (1 Trac	ck)	C	overed Trench (HST only) (2 Trac	ks)
Subsection 2		Base: 2009 (3rd Quarter)			D				D	
		Quartery	Start: 843 + 00	End: 905 + 00	1.17	Miles	Start: 843 + 00	End: 905 + 00	1.17	Miles
Subsection Details					Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 843 + 00	End: 905 + 00	0.00 Miles 1.17 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	E11a: 703 1 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile) Single Track Tunnel (Mile)			Start: 0 + 00 Start: 843 + 00	End: 905 + 00	0.00 Miles 1.17 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Single Track Trench (Mile)			Start: 0 + 00	21101700100	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$ -			0.00	\$.
2 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00				0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00				1.17	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00	\$ -
Three Track Section - Total (See note)										
Three-track Section - At Grade	Mile	\$ 3,150,336			0.00				0.00	
Three-Track Section - On Structure Three-Track Section - In Tunnel or Subway	Mile Mile	\$ 7,050,240 \$ 7,050,240			0.00 0.00	\$ -				\$ - \$ -
Three-Track Section - In Trumer of Subway Three-Track Section - In Trench	Mile	\$ 7,050,240			0.00				0.00	
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	¢			0.00	\$ -
Four-Track Section - At Grade Four-Track Section - On Structure	Mile	\$ 9,400,320				\$ -			0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00				0.00	\$ -
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$ -			0	\$ -
Single Track - Total										
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0	\$ -
6 Single Track Section - On structure	Mile	\$ 2,350,080				\$ -			0	\$ -
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			1.17 0				0	\$ - \$ -
of Single Track Section III Heneil	IVIIIC	Ψ 2,330,000			Ü	Ψ				*
9 Freight Double Track - At Grade	Mile	\$ 2,839,552				\$ -			0	\$ -
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0	\$ -
Earthwork Items										
1 Site Preparation - Undeveloped	Acre	\$ 9,216			9.25				15.66	
2 Total Cut 3 Total Fill	CY	\$ 6.00 \$ 6.00			298518.52 0.00				505185.19 0.00	
4 Borrow	CY	\$ 13.00			0.00				0.00	
5 Spoil	CY	\$ 13.00			298518.52	\$ 3,880,741			505185.19	\$ 6,567,407
6 Landscape erosion Control	Acre	\$ 6,144			0.00				0.00	
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Ear	\$ 144,384 thwork			0.00	\$ 287,856			0.00	\$ - 487,140
	370 Edi	I				207,000				407,140
Structures, Tunnels, Walls	NATI-	¢ 24.072.772			0.00	*			0.00	¢.
1 Standard Structure 2 High Structure	Mile Mile	\$ 34,972,672 \$ 40,424,448			0.00	\$ -			0.00	\$ -
3 Long Span Structure	Mile	\$ 61,919,232				\$ -				\$ -
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264				\$ - \$				\$ - \$ -
7 Twin Single Track Difficulties (<6 Miles)	Mile	\$ 106,637,312				\$ -				\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$ -				\$ -
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile Mile	\$ 146,887,680 \$ 79,200,000			0.00	\$ •			1.17	\$ 172,481,745 \$
Double Track Milled (Soft Soil) Double Track TBM (<6 Miles)	Mile	\$ 79,200,000				ψ <u>-</u>				ψ -
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896								
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				-				\$ -
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0.00	\$ - \$ -			0.00	\$ - \$ -
14 Trench Short	Mile	\$ 78,843,904			0.00	\$ -			0.00	
15 Trench Long	Mile	\$ 57,524,224				\$ -			4.4	\$ - 12.012.251
16 Mechanical & Electrical for Tunnels 17 Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			1.17 0.00				1.17 0.00	
18 Containment Walls	Mile	\$ 5,907,456			0.00				0.00	
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			1.17					\$ -
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile	\$ 293,775,360				\$ - \$ -				\$ - \$ -
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624				- ·				-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792								
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -			0.00	\$ -
Grade Separations										
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -				\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				-				\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680		l		\$ -				\$ -

COST ELEMENTS	UNIT	UNIT PRICE	(Covered Trench (F	HST only) (1 Tra	ck)		C	overed Trench (HST only) (2 Trad	cks)	
Subsection 2		Base: 2009 (3rd Quarter)			D					D		
		Quarter)	Start: 843 + 00	End: 905 + 00		Miles		Start: 843 + 00	End: 905 + 00		7 Miles	
Subsection Details					Quant.	Cost				Quant.		Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	0031		Start: 0 + 00	End: 0 + 00	0.00 Miles		0031
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles			Start: 0 + 00 Start: 843 + 00	End: 905 + 00	0.00 Miles 1.17 Miles		
Double Track Turner (Mile) Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles			Start: 0 + 00	E110. 905 + 00	0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Single Track At-Grade (Mile) Single Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		
Single Track Tunnel (Mile)			Start: 843 + 00	End: 905 + 00	1.17 Miles			Start: 0 + 00		0.00 Miles		
Single Track Trench (Mile) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	00	\$ 2,029,568	Start: 0 + 00		0.00 Miles	\$		Start: 0 + 00		0.00 Miles	¢	
Roadway Crossing HSR - 2 Lane Roadway Orter 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) Street Bridging HSR Trench Minor Crossing Closures	ea ea ea ea ea ea	\$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784 \$ 87,040			0	, , , , , , , , , , , , , , , , , , ,	- - - - -				\$ \$ \$ \$ \$ \$	- - - - -
Building Items 1 Intermediate Passenger Stations 1 Intermediate Passenger Stations (Millbrae) 2 Terminal Passenger Station - At-Grade Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench 3 Maintenance Facility 4 Parking - Structures 5 Parking - At Grade	Each Each Each Each Each Each Each Each	\$ - \$12,562,617 \$ - \$15,000,000 \$15,000,000 \$15,000,000 \$123,921,884 \$ - \$			0.5	\$ 6,28 \$ 5 \$ 5 \$ 5 \$ 5	31,309 - - - - - -			1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	12,562,617 - - - - - - - -
Rail & Utility Relocation 1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent) 3 Single Track Removal 4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile Mile Mile Mile Mile Mile	\$ 2,000,896 \$ 2,000,896 \$ 130,048 \$ 1,548,288 \$ 1,084,416 \$ 775,168 \$ 464,896 \$ 30,720				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$					\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - - -
ROW (Not Included) ROW required for each segment Dense Urban Urban Dense Suburban Suburban Undeveloped ROW required for Temp. Construction Easement Dense Urban Urban Dense Suburban Suburban Urban Urban Suburban Suburban	Acre Acre Acre Acre Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418 \$ 3,642				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$					\$	- - - - - -
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban 7 Urban 8 Dense Suburban 9 Suburban 10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre Acre Acre Acre	\$ 2,786,321 \$ 1,371,510 \$ 908,134 \$ 208,418 \$ 3,642				\$ \$ \$ \$ \$ \$	- - - - - 93,414				\$ \$ \$ \$	- - - - 6,441,201
System Elements 1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile Mile	\$ 2,070,000 \$ 540,000 \$ 108,000			1.17 1.17 1.17	\$ 63	30,682 34,091 26,818			1.17 1.17 1.17	\$	2,430,682 634,091 126,818
Electrification Items 1 Traction Power supply 2 Traction Power Distribution Program Implementation Costs (per screening) Program Implementation Costs	Mile Mile	\$ 1,170,000 \$ 1,485,000			1.17 1.17	\$ 1,74 \$ 194,97	73,864 43,750 16,427 03,689			1.17 1.17	\$ \$ 2	1,373,864 1,743,750 227,457,096 58,001,559
Contingencies (per screening) (25%)						\$ 48,72	29,107				\$	56,864,274
Subtotal						\$ 293,34	49,223				\$ 3	342,322,929
Subtotal (Rounded)						\$ 293,000	000	•				2,000,000

Subtotal (Rounded) \$ 293,000,000 \$ 342,000,000

		3A (0.8 miles)			3B (1.9 miles)		3	3C & 3D (1.8 miles)	3E (0.5 miles)
Subsection 3	At Grade	Open Trench	Covered Trench/ Tunnel	Aerial Viaduct	Open Trench	Covered Trench/ Tunnel	Aerial Viaduct	Open Trench	Covered Trench/ Tunnel	At Grade
Capital Cost (\$2009 in Millions) does not include ROW	\$11	\$132	\$345	\$194	\$433	\$937	\$265	\$425	\$894	\$30
Acquisition Cost of Permanent ROW	Highest	Medium	Lowest	Medium	Medium	Lowest	Medium	Medium	Lowest	Highest
Notes:				and Burlingame	_	and Burlingame Stations	 Caltrain San Mateo Station; 1st, 2nd, 3rd, 4th, 5th, and 9th Aves to be partially lowered. 		1. Caltrain San Mateo Station	1. Caltrain Hayward Park Station

COST ELEMENTS	UNIT	UNIT PRICE	At	Grade		Оре	en Trench		Cove	red Trench	
Subsection 3		Base: 2009	Start: 905 + 00 End: 945 + 00	A 0.76 Miles	:	Start: 905 + 00 End: 945 + 00	A 0.76 Mi	iles	Start: 905 + 00	A 0.76 Mile	S
		(3rd Quarter)	Start: 700 + 00 Ena. 710 + 00			otart. 700 + 00 End. 710 + 00			Start: 700 + 00 End: 710 + 00		
subsection Details Houble Track At-Grade (Mile)			Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost
Ouble Track Elevated (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
ouble Track Tunnel (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
ouble Track Trench (Mile) our Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 905 + 00 End: 945 + 00	0.00 Miles 0.76 Miles		Start: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 905 + 00 End: 945 + 00	0.76 Miles	
our Track Trench (Mile)		ı	Start: 0 + 00	0.00 Miles		Start: 905 + 00 End: 945 + 00	0.76 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224		0.00 \$			0.00 \$			0.00 \$	
2 Double Track Section - At Grade	Mile	\$ 4,700,160		0.00 \$	-		0.00 \$	-		0.00 \$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160		0.00 \$	-		0.00 \$	-		0.00 \$	-
4 Double Track Section - In Trench	Mile	\$ 4,700,160		0.00 \$	-		0.00 \$	=		0.00 \$	-
Four Track Section - Total											
Four-track Section - At Grade	Mile	\$ 4,200,448		0.76 \$	3,182,158		0.00 \$	-		0.00 \$	-
Four-Track Section - On Structure	Mile	\$ 9,400,320		0 \$	-		0.00 \$	-		0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		0 \$	-		0.00 \$			0.76 \$	7,121,455
Four-Track Section - In Trench	Mile	\$ 9,400,320		0 \$	-		0.76 \$	7,121,455		0.00 \$	-
Single Track - Total											
5 Single Track Section - At Grade	Mile	\$ 1,549,312		0 \$	-		0 \$	-		0 \$	-
6 Single Track Section - On structure	Mile	\$ 2,350,080		0 \$	-		0 \$	-		0 \$	-
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080		0 \$	-		0 \$	-		0 \$	-
Single Hack Section - In Hench	IVIIIE	\$ 2,330,060		0 \$	-		0 \$	-		0 \$	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552		0 \$	-		0 \$	-		0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312		0 \$	-		0 \$	=		0 \$	-
Earthwork Items											
1 Site Preparation - Undeveloped	Acre	\$ 9,216		0.00 \$	-		10.10 \$	93,091		10.10 \$	93,091
2 Total Cut	CY	\$ 6.00		0.00 \$	-		162962.96 \$	977,778		162962.96 \$	977,778
3 Total Fill	CY	\$ 6.00		0.00 \$	-		0.00 \$	-		0.00 \$	-
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00		0.00 \$ 0.00 \$	-		0.00 \$	- 2 110 E10		0.00 \$ 162962.96 \$	2,118,519
6 Landscape erosion Control	Acre	\$ 13.00		0.00 \$	-		162962.96 \$ 10.10 \$	2,118,519 62,061		0.00 \$	2,118,519
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384		0.76 \$	109,382		0.76 \$	109,382		0.00 \$	-
8 Special Drainage Facilities	5% Eart	hwork		\$	5,469		\$	168,041		\$	159,469
Structures, Tunnels, Walls											
1 Standard Structure	Mile	\$ 34,972,672		0 \$	_		0 \$	-		0 \$	_
2 High Structure	Mile	\$ 40,424,448		\$	-		\$	-		\$	-
3 Long Span Structure	Mile	\$ 61,919,232		\$	-		\$	-		\$	-
Waterway Crossing - Primary Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408		\$	-		\$	-		\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264		\$	-		\$	-		\$	-
7 Twin Single Track TBM (<6 Miles)		\$ 106,637,312		\$	-		\$	-		\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896		\$	-		\$	-		\$	-
9 Double Track Drill & Blast 0 Double Track Mined (Soft Soil)	Mile Mile	\$ 146,887,680 \$ 79,200,000		0 \$	-		0 \$	=		0 \$	-
Double Track Milled (Soft Soft) Double Track TBM (<6 Miles)	Mile	\$ 106,637,312		\$	-			=		•	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896		\$	-						
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952		\$	-		\$	-		\$	-
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080		\$	-		\$	-		\$	-
4 Trench Short	Mile	\$ 131,246,080 \$ 78,843,904		0 \$	-		0.76 \$	59,730,230		0 \$	
5 Trench Long	Mile	\$ 57,524,224		\$	-		\$	- 1		\$	-
6 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704		0 \$	-		0 \$	-		0.76 \$	8,976,291
7 Retaining Walls 8 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456		0 \$	-		0.76 \$ 0.76 \$	6,525,673 4,475,345		0 \$	-
S Containment walls S Single Track Cut and Cover Subway	Mile	\$ 5,907,456		\$	-		0.70 \$	4,470,345		\$	-
Four Track Drill & Blast	Mile	\$ 293,775,360		\$	-		\$	-		\$	-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000		\$	-		\$	-		\$	-
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624		\$	-						
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160		0.00 \$	-		0.00 \$	_		0.76 \$	198,857,697
		÷ 202,172,100		J.00 \$	_		0.00	_		3.70	0,001,071
Grade Separations											
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352		\$	-		\$	=		\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680		\$	-			=		\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Suburbari)	ea	\$ 2,759,680		\$	-		\$	- -		\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520		\$	-		\$	-		\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216		\$	-		\$	-		\$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816		\$	-		\$	-		\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784		\$ \$	-		\$	-		\$	-
		\$ 1,370,764		1 \$	87,040			-		\$	_
8 Minor Crossing Closures	ea	Ψ 07,040		Ι Ψ	07,010		ų.		III		

COST ELEMENTS		UNIT	UNIT PRICE		At	-Grade			Орег	n Trench			Covere	ed Trench	
Subsection 3			Base: 2009	01 1 005 00	I = 1 045 00	Α		0		A		01 1 005 00	T = 1 045 00	A	
			(3rd Quarter)	Start: 905 + 00	End: 945 + 00	0.76	Miles	Start: 905 + 00	End: 945 + 00	0.7	6 Miles	Start: 905 + 00	End: 945 + 00	0.76	Miles
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Tunner (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	+	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					End: 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles	
Four Track Trench (Mile) 1 Intermediate Passenger Stations		Fools	¢.	Start: 0 + 00		0.00 Miles	¢	Start: 905 + 00	End: 945 + 00	0.76 Miles	•	Start: 0 + 00	End: 0 + 00	0.00 Miles	Φ.
2 Terminal Passenger Stations		Each Each	\$ -				\$ -				\$ -				\$ - \$ -
Caltrain Passenger Station - At-Grade		Each	\$15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - On Structure		Each	\$15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway		Each	\$15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Trench		Each	\$15,000,000				\$ -				-				-
3 Maintenance Facility			\$ 123,921,884				\$ -				\$ -				\$ -
4 Parking - Structures 5 Parking - At Grade		space space	\$ - \$				\$ - \$				- ¢				→ - ¢
Sir diking - At Orade		space	Ψ -		1		· -				-				Ψ -
Rail & Utility Relocation					1										
1 Single Track Relocation (Temporary)			\$ 2,000,896		1		\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)			\$ 2,000,896				\$ -				\$ -				\$ -
3 Single Track Removal			\$ 130,048				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban			\$ 1,548,288				\$ -				-				\$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban			\$ 1,084,416 \$ 775,168								-				\$ -
7 Major Utility Relocations - Suburban			\$ 464,896				\$				\$ -				э \$
8 Major Utility Relocations - Subdiban			\$ 30,720				\$ -				\$ -				\$ -
ROW (Not Included)															
ROW required for each segment															
1 Dense Urban			\$ 2,786,321				\$ -				-				\$ -
2 Urban 3 Dense Suburban			\$ 1,371,510 \$ 908,134								\$ -				\$ -
4 Suburban			\$ 208,418				\$ -				\$ -				\$ - \$
5 Undeveloped			\$ 3,642				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement															
1 Dense Urban		Acre					\$ -				\$ -				\$ -
2 Urban		Acre					\$ -				-				\$ -
3 Dense Suburban 4 Suburban		Acre Acre									- •				\$ -
5 Undeveloped		Acre					\$				\$ -				Ф \$
Right-of-Way Required for Stations, Maintenance & Parking Facilities		71010					*				*				*
6 Dense Urban		Acre	\$ 2,786,321				\$ -				\$ -				\$ -
7 Urban			\$ 1,371,510				-				-				-
8 Dense Suburban			\$ 908,134 \$ 208,418				-				\$ -				\$ -
9 Suburban 10 Undeveloped			\$ 208,418 \$ 3,642				\$ -				\$ -				\$ - ¢ -
Environmental Mitigation = 3% Line Costs		ACIC	ψ 3,04Z				\$ 101,521				\$ 2,441,447				\$ 6,549,129
															-,
System Elements					1										
1 Signaling (ATC)			\$ 2,070,000		1	0.76				0.76				0.76	
2 Communications (w/ Fiber Optic Backbone)			\$ 540,000 \$ 108.000		1	0.76 0.76				0.76 0.76				0.76 0.76	
3 Wayside Protection System		MIIIG	\$ 108,000		1	0.76	φ δ1,δ18			0.76	φ δ1,δ1δ			U./6	φ ὅ١,ὅ١δ
Electrification Items					1										
1 Traction Power supply		Mile	\$ 1,170,000		1	0.76	\$ 886,364			0.76	\$ 886,364			0.76	\$ 886,364
2 Traction Power Distribution		Mile	\$ 1,485,000		1	0.76	\$ 1,125,000			0.76	\$ 1,125,000			0.76	\$ 1,125,000
	Subtotal						\$ 7,556,024				\$ 87,893,476				\$ 228,923,883
Program Implementation Costs (per screening)							\$ 1,926,786				\$ 22,412,836				\$ 58,375,590
Program Implementation Costs					1										
Contingencies (per screening) (25%)							\$ 1,889,006				\$ 21,973,369				\$ 57,230,971
, (,557,500						<u> </u>		3.,200,771
Subtotal				•	•		\$ 11,371,817				\$ 132,279,681				\$ 344,530,443
Subtotal (Dounded)							¢ 11 000 000	·			\$ 122,000,000				¢ 245 000 000

Subtotal (Rounded) \$ 11,000,000 \$ 132,000,000 \$ 345,000,000

COST ELEMENTS	UNIT	UNIT PRICE			d Viaduct				Trench			Cover	red Trench	
Subsection 3		Base: 2009	Start: 945 + 00	End: 1045 + 00	B 1.89	Miles	Start: 945 + 00	End: 1045 + 00	B 1.89 N	Miles	Start: 945 + 00	End: 1045 + 00	B 1.89 Mile	es
Subsection Details		(3rd Quarter)	21223710700											Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00	Ouant. 0.00 Miles 0.00 Miles 0.00 Miles	Cost	Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles 0.00 Miles 0.00 Miles	Cost	Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles 0.00 Miles 0.00 Miles	Cost
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile) Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00 Start: 945 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 1045 + 00	0.00 Miles 0.00 Miles 1.89 Miles 0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 945 + 00	End: 0 + 00 End: 0 + 00 End: 0 + 00 End: 1045 + 00	0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles 1.89 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 945 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00 End: 1045 + 00 End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles 1.89 Miles 0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade 2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile Mile Mile	\$ 2,100,224 \$ 4,700,160 \$ 4,700,160 \$ 4,700,160			0.00 0.00 0.00 0.00	\$			0.00	\$ - \$ - \$ -			0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	
Four Track Section - Total Four-track Section - At Grade Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile Mile Mile	\$ 4,200,448 \$ 9,400,320 \$ 9,400,320 \$ 9,400,320			0.00 1.89 0.00 0.00	\$ 17,803,636 \$			0.00	\$ - \$ - \$ - \$ 17,803,636			0.00 \$ 0.00 \$ 1.89 \$ 0.00 \$	17,803,63
Single Track - Total 5 Single Track Section - At Grade 6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile Mile Mile	\$ 1,549,312 \$ 2,350,080 \$ 2,350,080 \$ 2,350,080			0 0 0 0	\$ \$ \$			0 : 0 : 0 :	\$ - \$ - \$ -			0 \$ 0 \$ 0 \$ 0 \$	
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0	\$			0 :	\$ - \$ -			0 0 \$	
Earthwork Items 1 Site Preparation - Undeveloped 2 Total Cut 3 Total Fill 4 Borrow 5 Spoil 6 Landscape erosion Control 7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Acre CY CY CY CY Acre Mile 5% Ear	\$ 9,216 \$ 6.00 \$ 6.00 \$ 13.00 \$ 13.00 \$ 6,144 \$ 144,384			25.25 0 0.00 0.00 0.00 0.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$			1629629.63 0.00 0.00 1629629.63 25.25 1.89				25.25 \$ 1629629,63 \$ 814814.81 \$ 0.00 \$ 814814.81 \$ 0.00 \$ 0.00 \$	232,727 9,777,778 4,888,889 10,592,593 1,274,599
Structures, Tunnels, Walls 1 Standard Structure 2 High Structure 3 Long Span Structure 4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 34,972,672 \$ 40,424,448 \$ 61,919,232 \$ 85,342,208 \$ 92,049,408 \$ 142,731,264 \$ 106,637,312 \$ 176,720,896 \$ 146,887,680 \$ 79,200,000 \$ 106,637,312			1.89 0.01 0.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			0.01	\$ - \$ - \$ - \$ 697,344 \$ - \$ - \$ -			0 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	697,344
Double Track TBM w/3rd Tube (>6 Miles) Seismic Chamber (Drill & Blast/Mined) Crossovers 13 Cut & Cover Double Track Tunnel Trench Short Trench Long 16 Mechanical & Electrical for Tunnels 77 Retaining Walls Containment Walls Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Mined (Soft Soil) Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile ea ea Mile Mile Mile Mile Mile Mile Mile Mile	\$ 176,720,896 \$ 126,205,952 \$ 442,368 \$ 131,246,080 \$ 78,843,904 \$ 57,524,224 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160			0.00 0.00 0.00 0.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			1.89 0.00 1.89 1.89	\$ 16,314,182 \$ 11,188,364 \$ - \$ -			\$ 0 \$ 0.00 \$ 1.89 \$ 0.00 \$ 0.00 \$ \$ \$	22,440,727
Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) Street Bridging HSR Trench Minor Crossing Closures Building Items	ea ea ea ea ea ea ea ea ea	\$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784 \$ 87,040				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$			_	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	

COST ELEMENTS	UNIT	UNIT PRICE			d Viaduct			Open	Trench			Cove	red Trench	
Subsection 3		Base: 2009	Start: 045 + 00	End: 1045 + 00	B 1 00	Miles	Start: 945 + 00	End: 1045 : 00	B 1.89	Milos	Start: 945 + 00	End: 1045 + 00	B 1 00	9 Miles
		(3rd Quarter)	Start. 745 + 00	L11u. 1045 + 00	1.07	Willes	Start. 745 + 00	Liiu. 1045 + 00	1.03	Willes	Start. 745 + 00	L11a. 1045 + 00	1.0	7 IVIIIes
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Turner (Wile) Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles	
Four Track Trench (Mile)	T root		Start: 0 + 00		0.00 Miles	*	Start: 945 + 00	End: 1045 + 00	1.89 Miles	*	Start: 0 + 00	End: 0 + 00	0.00 Miles	*
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each					\$ -				\$ -				\$
Caltrain Passenger Station - At-Grade	Each					\$ -				\$ -				\$
Caltrain Passenger Station - On Structure	Each				2	\$ 30,000,000				\$ -				\$
Caltrain Passenger Station - In Tunnel or Subway	Each					\$ -				\$ -				\$
Caltrain Passenger Station - In Trench	Each					\$ -			2	\$ 30,000,000			2	\$ 30,000,00
3 Maintenance Facility	Each					\$ -				\$ -				\$
4 Parking - Structures	space					\$ -				-				\$
5 Parking - At Grade	space	e \$ -				\$ -				\$ -				\$
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				-				-				\$
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				-				\$
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile	\$ 464,896 \$ 30,720				\$ -				-				\$
ofinajor office Relocations - office veloped	IVIIIE	\$ 30,720				φ -				φ -				φ .
ROW (Not Included)														
ROW required for each segment														
1 Dense Urban	Acre					\$ -				\$ -				\$
2 Urban	Acre					\$ -				\$ -				\$
3 Dense Suburban	Acre	\$ 908,134				-				-				\$
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$
ROW required for Temp. Construction Easement 1 Dense Urban	Acre					¢				\$				¢
2 Urban	Acre					\$ -				\$ -				\$
3 Dense Suburban	Acre					\$ -				\$ -				\$
4 Suburban	Acre					\$ -				\$ -				\$
5 Undeveloped	Acre					\$ -				\$ -				\$
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6 Dense Urban	Acre					\$ -				\$ -				\$
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -				\$ -				\$
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$
10 Undeveloped	Acre					\$ -				\$ -				\$
Environmental Mitigation = 3% Line Costs						\$ 3,449,444				\$ 8,091,747				\$ 17,845,576
_														
System Elements		1												
1 Signaling (ATC)	Mile	\$ 2,070,000			1.89				1.89				1.89	
2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 540,000 \$ 108,000			1.89				1.89				1.89	
3 Wayside Protection System	liviile	\$ 108,000			1.89	\$ 204,545			1.89	\$ 204,545			1.89	\$ 204,54
Electrification Items														
1 Traction Power supply	Mile	\$ 1,170,000			1.89	\$ 2,215,909			1.89	\$ 2,215,909			1.89	\$ 2,215,909
2 Traction Power Distribution	Mile	\$ 1,485,000			1.89				1.89				1.89	
	Subtotal					\$ 128,607,046				\$ 287,992,768				\$ 622,874,24
Program Implementation Costs (per screening)						\$ 32,794,797				\$ 73,438,156				\$ 158,832,93
Program Implementation Costs														
Contingencies (per screening) (25%)						\$ 32,151,761				\$ 71,998,192				\$ 155,718,562
Contingencies (per screening) (23%)						ψ 32,131,/01				ψ /1,770,192				ψ 100,710,50.
Subtotal	I		1	l .		\$ 193,553,604		1	<u> </u>	\$ 433,429,115		1	1	\$ 937,425,74
Subtotal (Dounded)						\$ 193,333,004				\$ 433,429,113				\$ 937,423,74

Subtotal (Rounded) \$ 194,000,000 \$ 433,000,000 \$ 937,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Elevat	ed Viaduct			Open	Trench			Covere	d Trench	
Subsection 3		Base: 2009 (3rd Quarter)	Start: 1045 + 00	End: 1087 + 00	C 0.8	0 Miles	Start: 1045 + 00	End: 1087 + 00	C 0.801	Miles	Start: 1045 + 00	End: 1087 + 00	C 0.80 M	iles
Subsection Details		(SIU QUARTER)			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Atelevated (Mile) Double Track Tunnel (Mile) Double Track Trench (Mile) Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 1045 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00 End: 1087 + 00	0.00 Miles	Cust	Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00 End: 0 + 00	0.00 Miles	CUST	Start: 0 + 00 Start: 1045 + 00	End: 0 + 00 End: 0 + 00 End: 0 + 00 End: 1087 + 00	Out Miles 0.00 Miles	CUST
Four Track Trench (Mile) Double Track Section - Total			Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Double Track Section - At Grade 2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile Mile Mile Mile	\$ 2,100,224 \$ 4,700,160 \$ 4,700,160 \$ 4,700,160			0.00 0.00 0.00 0.00	\$ - \$ -			0.00 0.00 0.00 0.00	\$ - \$ -			0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	-
Four Track Section - Total Four-track Section - At Grade Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile Mile Mile	\$ 4,200,448 \$ 9,400,320 \$ 9,400,320 \$ 9,400,320			0.00 0.80 0.00 0.00	\$ 7,477,527 \$ -			0.00 0.00 0.00 0.80	\$ - \$ -			0.00 \$ 0.00 \$ 0.80 \$ 0.00 \$	- 7,477,527
Single Track - Total 5 Single Track Section - At Grade 6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile Mile Mile	\$ 1,549,312 \$ 2,350,080 \$ 2,350,080 \$ 2,350,080			0.00 0.00 0.00 0.00	\$ - \$ -			0 0 0 0	\$ - \$ -			0 \$ 0 \$ 0 \$ 0 \$	-
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0.00 0.00				0				0 0 \$	
Earthwork Items 1 Site Preparation - Undeveloped 2 Total Cut 3 Total Fill 4 Borrow 5 Spoil Landscape erosion Control 7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Acre CY CY CY CY Acre Mile 5% Earti	\$ 9,216 \$ 6.00 \$ 6.00 \$ 13.00 \$ 13.00 \$ 144,384			10.61 0.00 0.00 0.00 0.00 0.00 0.00	\$ - \$ 5 \$ - \$ 5 \$ -			10.61 684444.44 0.00 0.00 684444.44 10.61 0.80	\$ 4,106,667 \$ - \$ 8,897,778 \$ 65,164			10.61 \$ 684444.44 \$ 342222.22 \$ 0.00 \$ 342222.22 \$ 0.00 \$ 0.00 \$	
Structures, Tunnels, Walls 1 Standard Structure 2 High Structure 3 Long Span Structure 4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile Mile Mile	\$ 34,972,672 \$ 40,424,448 \$ 61,919,232 \$ 85,342,208 \$ 92,049,408 \$ 142,731,264 \$ 106,637,312 \$ 176,720,896 \$ 146,887,680 \$ 79,200,000 \$ 106,637,312			0.00	\$ - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -			0.01	\$ - \$ - \$ 697,344 \$ - \$ -			0 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - 344 - - - - -
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined) 2 Crossovers 13 Cut & Cover Double Track Tunnel 14 Trench Short 15 Trench Long 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track Miles (Soft Soil) Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile ea ea Mile Mile Mile Mile Mile Mile Mile Mile	\$ 176,720,896 \$ 126,205,952 \$ 442,368 \$ 131,246,080 \$ 78,843,904 \$ 57,524,224 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160			0.00 0.00 0.00 0.00	\$ - \$ - \$ - \$ 5 -			0 0.80 0.00 0.80 0.80	\$ 62,716,742 \$ - \$ 6,851,956 \$ 4,699,113 \$ - \$ -			0 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ \$ \$ \$ \$	9,425,105 9,425,105 - - - - -
Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) Street Bridging HSR Trench Minor Crossing Closures Building Items		\$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784 \$ 87,040				\$ - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -			6	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- - - - - - -

COST ELEMENTS	U	NIT UNIT PRICE		Elevat	ed Viaduct			Open	Trench			Covere	d Trench	
Subsection 3		Base: 2009			С				С				С	
		(3rd Quarter)	Start: 1045 + 00	End: 1087 + 00	0.8	0 Miles	Start: 1045 + 00	End: 1087 + 00	0.80 Mi	les	Start: 1045 + 00	End: 1087 + 00	0.80	Miles
Subsection Details		1			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	F 1 2 22	0.00 Miles		Start: 0 + 00	E 10 00	0.00 Miles		Start: 0 + 00	E 10 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 1045 + 00	End: 0 + 00 End: 1087 + 00	0.00 Miles 0.80 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	Liiu. 1007 ∓ 00	0.00 Miles		Start: 0 + 00	LIIU. U T UU	0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Four Track Trench (Mile)	T =	L T &	Start: 0 + 00		0.00 Miles	Φ.	Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	Φ.
Intermediate Passenger Stations Terminal Passenger Stations		ach \$ ach \$				\$ -			\$	-				\$ - \$ -
Caltrain Passenger Station - At-Grade	E	ach \$15,000,000				\$ -			\$	-				\$ -
Caltrain Passenger Station - On Structure		ach \$15,000,000			1	\$ 15,000,000			\$	-				\$ -
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench		ach \$15,000,000 ach \$15,000,000				\$ - \$			1 \$	15,000,000			1	\$ - \$ 15,000,000
3 Maintenance Facility	E	ach \$ 123,921,884				\$ -			\$	-			·	\$ -
4 Parking - Structures		ace \$				\$ •			\$	-				\$ •
5 Parking - At Grade	St	ace \$				φ -			*	-				Φ -
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mi Mi					\$ -			\$	-				\$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mi					\$ -			\$	-				\$ -
4 Major Utility Relocations - Dense Urban	Mi	le \$ 1,548,288	1			\$ -			\$	-				\$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mi Mi					\$ •			\$	-				\$ -
7 Major Utility Relocations - Dense Suburban	Mi					\$ -			\$	-				\$ -
8 Major Utility Relocations - Undeveloped	Mi					\$ -			\$	-				\$ -
ROW (Not Included)														
ROW required for each segment														
1 Dense Urban		re \$ 2,786,321				\$ -			\$					\$ -
2 Urban 3 Dense Suburban	Αc	re \$ 1,371,510 re \$ 908,134				\$ -			\$					
4 Suburban	Ac					\$ -			\$					\$ -
5 Undeveloped	Ad					\$ -			\$	-				-
ROW required for Temp. Construction Easement 1 Dense Urban	٨	re				\$			¢					\$
2 Urban		re				\$ -			\$					\$ -
3 Dense Suburban	Ad	re				\$ -			\$	-				\$ -
4 Suburban 5 Undeveloped	Ac	re re				\$ -			\$					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities	A					-			4					-
6 Dense Urban		re \$ 2,786,321				\$ -			\$	-				\$ -
7 Urban 8 Dense Suburban		re \$ 1,371,510 re \$ 908,134				\$ -			\$					\$ -
9 Suburban		re \$ 208,418				\$ -			\$					\$ -
10 Undeveloped	Ad	re \$ 3,642				\$ -			\$	2 502 454				\$ -
Environmental Mitigation = 3% Line Costs						\$ 1,511,980			\$	3,593,451				\$ 7,579,276
System Elements														
1 Signaling (ATC)	Mi				0.80				0.80 \$				0.80	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mi Mi				0.80 0.80				0.80 \$ 0.80 \$				0.80 0.80	
	"				3.00	. 35,707			5.55 V	33,707			3.00	. 33,737
Electrification Items	1. A.	lo ¢ 1 170 000	J		0.00	¢ 020.702			0.00	020 (02			0.00	¢ 020.402
1 Traction Power supply 2 Traction Power Distribution	Mi Mi				0.80 0.80				0.80 \$ 0.80 \$				0.80 0.80	
	Subtotal	,,				\$ 56,185,288			\$	127,649,129			2100	\$ 264,495,778
Program Implementation Costs (per screening) Program Implementation Costs						\$ 14,327,248			\$	32,550,528				\$ 67,446,423
1 Togram implementation Costs														
Contingencies (per screening) (25%)						\$ 14,046,322			\$	31,912,282				\$ 66,123,944
Subtotal						\$ 84,558,859				102 111 020				\$ 398,066,145
Subtotal (Rounded)						\$ 84,558,859 \$ 85,000,000			\$	192,111,939				\$ 398,066,145 \$ 398,000,000

 Subtotal (Rounded)
 \$ 85,000,000
 \$ 192,000,000
 \$ 398,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Elevated	d Viaduct			Open	Trench			Covere	ed Trench	
ubsection 3		Base: 2009			D			•	D				D	
		(3rd Quarter)	Start: 1097 ± 00	End: 1140 + 00	D 1.00	Miles	Start: 1087 + 00	End: 1140 + 00	D 1.00 Mile	ne e	Start: 1097 ± 00	End: 1140 + 00	D 1.00 Mile	AC
			Start. 1007 + 00	L11u. 1140 + 00	1.00	ivilles	Start. 1007 + 00	L110. 1140 + 00	1.00 Wille	:3	Start. 1007 + 00	Liiu. 1140 + 00	1.00 Wille	U S
ubsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost
ouble Track At-Grade (Mile) ouble Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
puble Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
puble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)			Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Tunnel (Mile) our Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1087 + 00	End: 1140 + 00	0.00 Miles 1.00 Miles		Start: 1087 + 00 Start: 0 + 00	End: 1140 + 00 End: 0 + 00	1.00 Miles 0.00 Miles	
Double Track Section - Total			Start: 0 1 00		0.00 WIIC3		Start. 1007 00	Elia. 1140 1 00	1.00 WIIC3		Start. 0 1 00	Elia. 0 1 00	0.00 Willes	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00				0.00 \$	-			0.00 \$	
2 Double Track Section - On Structure	Mile Mile	\$ 4,700,160			0.00				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile	\$ 4,700,160 \$ 4,700,160			0.00				0.00 \$	-			0.00 \$	
- Boasto Hask Goods III Honor		1,700,700			0.00	*			0.00				0.00	
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00				0.00 \$	-			0.00 \$	
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			1.00 0.00				0.00 \$ 0.00 \$	-			0.00 \$ 1.00 \$	9,435,92
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00				1.00 \$	9,435,927			0.00 \$	7,100,72
Single Track - Total	8.471	A 540.015			2.2-	¢.								
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080			0.00				0 \$	-			0 \$	•
7 Single Track Section - Of Structure 7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0.00				0 \$	-			0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00				0 \$	-			0 \$	
9 Freight Double Track - At Grade 0 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0.00				0 \$	-			0 \$	-
or Freight Single Hack - At Grade	IVIIIe	\$ 1,549,312			0.00	5 -			0 \$	-			0 \$	-
Earthwork Items														
1 Site Preparation - Undeveloped	Acre	\$ 9,216			13.38				13.38 \$	123,345			13.38 \$	123,345
2 Total Cut	CY	\$ 6.00			0.00				863703.70 \$	5,182,222			863703.70 \$	5,182,222
3 Total Fill 4 Borrow	CY	\$ 6.00 \$ 13.00			0.00 0.00				0.00 \$ 0.00 \$	-			431851.85 \$ 0.00 \$	2,591,111
5 Spoil	CY	\$ 13.00			0.00				863703.70 \$	11,228,148			431851.85 \$	5,614,074
6 Landscape erosion Control	Acre	\$ 6,144			0.00				13.38 \$	82,230			0.00 \$	-
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00				1.00 \$	144,931			0.00 \$	-
8 Special Drainage Facilities	5% Earl	thwork				\$ 6,167			\$	838,044			\$	675,538
Structures, Tunnels, Walls														
1 Standard Structure	Mile	\$ 34,972,672			1.00	\$ 35,105,144			0 \$	-			0 \$	-
2 High Structure	Mile	\$ 40,424,448				\$ -			\$	-			\$	-
3 Long Span Structure	Mile	\$ 61,919,232				\$ -			\$	-			\$	-
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408				\$ - ¢			0.01 \$	697,344			0.01 \$	697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -			0.01 \$	077,344			0.01 \$	077,344
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$ -			\$	-			\$	-
9 Double Track Drill & Blast	Mile Mile	\$ 146,887,680			0.00	\$ -			0 \$	-			0 \$	-
0 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile	\$ 79,200,000 \$ 106,637,312				-			\$	-			\$	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896												
1 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$ -			\$	-			\$	
2 Crossovers 3 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368			0.00	\$ -			\$	-			0 \$	•
4 Trench Short	Mile	\$ 131,246,080 \$ 78,843,904			0.00 0.00				1.00 \$	79,142,555			0.00 \$	
5 Trench Long	Mile	\$ 57,524,224			0.00	\$ -			\$				\$	
6 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$ -			0.00 \$	-			1.00 \$	11,893,585
7 Retaining Walls	Mile	\$ 8,613,888			0.00				1.00 \$	8,646,516			0.00 \$	
8 Containment Walls 9 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080			0.00	\$ e			1.00 \$	5,929,833			0.00 \$	
Four Track Crill & Blast	Mile	\$ 131,246,080				\$ -			\$	-			\$	-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$ -			\$	-			\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624												
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	¢			0.00 \$				1.00 \$	263,486,448
I OUI TRUCK OULG OUVER TURNER	wille	φ ZUZ,47Z,10U			0.00	ψ -			0.00 \$	-			1.00 \$	۷۵,460,44۵
Grade Separations														
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			\$	-			\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			2	\$ 39,853,056			\$	-			\$	
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,759,680 \$ 2,029,568			4	\$ 11,038,720 \$			\$	-			\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,029,300				\$ -			\$	-				
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -			\$	-			\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -			\$	-			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				-			\$	- 0.000 704			\$	-
	0.0	¢ 1 200 704												
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040				\$ - \$ -			0 \$	8,392,704			\$	-

COST ELEMENTS		UNIT	UNIT PRICE		Elevate	d Viaduct			Open	Trench			Covere	d Trench		
Subsection 3	-		Base: 2009			D				D				D		
			(3rd Quarter)	Start: 1087 + 00	End: 11/0 ± 00	D 1.00) Miles	Start: 1087 + 00	End: 1140 + 00) Miles	Start: 1087 + 00	End: 1140 + 00	D 1.00) Miles	
				Start. 1007 + 00	Liiu. 1140 + 00	1.00) Wiles	Start. 1007 + 00	LIId. 1140 + 00	1.00) Willes	Start. 1007 + 00	LIIG. 1140 + 00	1.00	TWITES	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.		Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile) Double Track Tunnel (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	F	0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		
Four Track Trench (Mile) Building Items				Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
1 Intermediate Passenger Stations		Each	\$ -				\$ -				\$ -				\$	-
2 Terminal Passenger Stations			\$ -				\$ -				\$ -				\$	-
Caltrain Passenger Station - At-Grade		Each	\$15,000,000				\$ -				\$ -				\$	-
Caltrain Passenger Station - On Structure		Each	\$15,000,000			1	\$ 15,000,000				-				\$	-
Caltrain Passenger Station - In Tunnel or Subway		Each	\$15,000,000				-				\$ 15,000,000			1	\$	15 000 000
Caltrain Passenger Station - In Trench 3 Maintenance Facility		Each Each	\$15,000,000 \$ 123,921,884				\$ -			'	\$ 15,000,000 \$				\$	15,000,000
4 Parking - Structures			\$ 123,721,004				\$ -				\$ -				\$	-
5 Parking - At Grade		space	\$ -				\$ -				\$ -				\$	-
Rail & Utility Relocation																
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)			\$ 2,000,896 \$ 2,000,896				- 6								\$	-
3 Single Track Renoval			\$ 2,000,896				\$ -				\$ -				\$	-
4 Major Utility Relocations - Dense Urban			\$ 1,548,288				\$ -				\$ -				\$	-
5 Major Utility Relocations - Urban			\$ 1,084,416				\$ -				\$ -				\$	-
6 Major Utility Relocations - Dense Suburban			\$ 775,168				\$ -				\$ -				\$	-
7 Major Utility Relocations - Suburban			\$ 464,896				\$ -				-				\$	-
8 Major Utility Relocations - Undeveloped		Mile	\$ 30,720				\$ -				\$ -				\$	-
ROW (Not Included)																
ROW required for each segment																
1 Dense Urban	,	Acre	\$ 2,786,321				\$ -				\$ -				\$	-
2 Urban	,	Acre	\$ 1,371,510				\$ -				\$ -				\$	-
3 Dense Suburban			\$ 908,134				\$ -				\$ -				\$	-
4 Suburban			\$ 208,418				-				-				\$	-
5 Undeveloped ROW required for Temp. Construction Easement		Acre	\$ 3,642				\$ -				\$ -				\$	-
1 Dense Urban		Acre					\$ -				\$ -				\$	
2 Urban		Acre					\$ -				\$ -				\$	
3 Dense Suburban		Acre					\$ -				\$ -				\$	
4 Suburban		Acre					\$ -				\$ -				\$	-
5 Undeveloped	1	Acre					\$ -				-				\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban		Acre	\$ 2,786,321				¢				¢				¢	
7 Urban			\$ 1,371,510				\$ -				\$				\$	
8 Dense Suburban	1	Acre	\$ 908,134				\$ -				\$ -				\$	
9 Suburban	,	Acre	\$ 208,418				-				\$ -				\$	
10 Undeveloped	1	Acre	\$ 3,642				\$ -				\$ -				\$	-
Environmental Mitigation = 3% Line Costs							\$ 3,316,871				\$ 4,345,314				\$	9,440,988
System Elements																
1 Signaling (ATC)	ı	Mile	\$ 2,070,000			1.00	\$ 2,077,841			1.00	\$ 2,077,841			1.00	\$	2,077,841
2 Communications (w/ Fiber Optic Backbone)	1	Mile	\$ 540,000			1.00	\$ 542,045			1.00	\$ 542,045			1.00		542,045
3 Wayside Protection System	1	Mile	\$ 108,000			1.00	\$ 108,409			1.00				1.00		108,409
Flackiff aking House																
Electrification Items	١,	Mile	¢ 1 170 000			1.00	¢ 117//20			1.00	¢ 1174.422			1 00	¢	1 174 499
1 Traction Power supply 2 Traction Power Distribution			\$ 1,170,000 \$ 1,485,000			1.00 1.00				1.00 1.00				1.00 1.00		1,174,432 1,490,625
Z Traction I ower Distribution	Subtotal	WIIIC	ψ 1, 1 00,000			1.00	\$ 119,272,583			1.00	\$ 154,582,467				\$	329,533,936
Program Implementation Costs (per screening)							\$ 30,414,509				\$ 39,418,529				\$	84,031,154
Program Implementation Costs																
Contingencies (per screening) (25%)							\$ 29,818,146				\$ 38,645,617				\$	82,383,484
Subtotal				L		l .	\$ 179,505,238		<u> </u>	L	\$ 232,646,612		l .		\$	495,948,573
Jubiolai							Ψ 177,000,230				Ψ 2J2,U4U,012	1			Ψ	773,740,313

	COST ELEMENTS	UNIT	UNIT PRICE		At-G	rade		
Su	bsection 3		Base: 2009 (3rd Quarter)		1			
			(Sid Quarter)	Start: 1140 + 00	End: 1164 + 00	0.45 [Miles	S
i i l	osection Details					Quant.		Cost
	uble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		COSt
	uble Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		
	uble Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
	uble Track Trench (Mile) ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 1140 + 00	End: 1164 + 00	0.00 Miles 0.45 Miles		
	r Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
OL	ır Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
0	ur Track Trench (Mile)		ı	Start: 0 + 00		0.00 Miles		
1	Double Track Section - Total Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	¢	
	Double Track Section - At Grade Double Track Section - On Structure	Mile	\$ 4,700,160			0.00		-
	Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00		-
4	Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	-
	Farm Transle Continue Total							
	Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.45	\$	1,909,295
	Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00		1,707,273
	Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0	\$	-
	Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$	-
	Single Track Total							
5	Single Track - Total Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$	
	Single Track Section - On structure	Mile	\$ 2,350,080			0		
7	Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080				\$	
8	Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
٥	Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
	Freight Single Track - At Grade	Mile	\$ 2,839,552			0	\$	
	Troight Shight Track 74 Grade	IVIIIC	Ψ 1,017,012			Ö	Ψ	
	Earthwork Items							
	Site Preparation - Undeveloped	Acre	\$ 9,216			0.00		
	Total Cut Total Fill	CY	\$ 6.00 \$ 6.00			0.00 0.00		
	Borrow	CY	\$ 6.00 \$ 13.00			0.00		
	Spoil	CY	\$ 13.00			0.00		
	Landscape erosion Control	Acre	\$ 6,144			0.00		-
	Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.45		65,629
8	Special Drainage Facilities	5% Eart	hwork I				\$	3,281
	Structures, Tunnels, Walls							
1	Standard Structure	Mile	\$ 34,972,672			0.00	\$	-
	High Structure	Mile	\$ 40,424,448				\$	-
	Long Span Structure	Mile	\$ 61,919,232				\$	-
	Waterway Crossing - Primary	Mile Mile	\$ 85,342,208				\$	
6	Waterway Crossing - Secondary (Irrigation Canal) Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 92,049,408 \$ 142,731,264				\$ \$	
7	Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$	
	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
	Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$	
10	Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$	
	Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896					
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,896				\$	
12	Crossovers	ea	\$ 442,368				\$	
	Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0		
	Trench Short	Mile	\$ 78,843,904			0	-	
	Trench Long Mechanical & Floatrical for Tunnels	Mile	\$ 57,524,224				\$	
	Mechanical & Electrical for Tunnels Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888				\$ \$	
	Containment Walls	Mile	\$ 5,907,456					
	Single Track Cut and Cover Subway	Mile	\$ 131,246,080			Ĭ	\$	
	Four Track Drill & Blast	Mile	\$ 293,775,360				\$	
	Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$	
	Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792					
	Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	
			,,			5.50	•	
	Grade Separations							
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
2	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				\$ \$	
	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,759,680				\$	
	Roadway Crossing HSR - 4 Lane Roadway Origet 2 Tracks (Urban)	ea	\$ 3,563,520				\$	
	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$	
7	Street Bridging HSR Trench Minor Crossing Closures	ea	\$ 1,398,784 \$ 87,040				\$	
c		ea		•	1		\$	

COST ELEMENTS	UNIT	UNIT PRICE		At-G	irade		
Subsection 3		Base: 2009			E		
		(3rd Quarter)	Start: 1140 + 00	End: 1164 + 00		Miles	5
							0 1
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	1	Cost
Double Track Elevated (Mile)			Start: 0 + 00	Elia. 0 1 00	0.00 Miles		
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 1140 + 00	End: 1164 + 00	0.45 Miles		
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	-	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles	1	
Building Items			Start. 0 + 00		0.00 Miles		
1 Intermediate Passenger Stations	Each	\$ -				\$	-
2 Terminal Passenger Stations	Each					\$	-
Caltrain Passenger Station - At-Grade	Each				1	\$	15,000,000
Caltrain Passenger Station - On Structure	Each					\$	-
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each					\$	-
3 Maintenance Facility	Each					\$	-
4 Parking - Structures	space					\$	-
5 Parking - At Grade	space					\$	-
Rail & Utility Relocation	h #:1 -	¢ 2,000,007				4	
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896				\$	-
3 Single Track Removal	Mile	\$ 130,048				\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$	-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$	-
ROW (Not Included)							
ROW required for each segment							
1 Dense Urban	Acre	\$ 2,786,321				\$	-
2 Urban	Acre	\$ 1,371,510				\$	-
3 Dense Suburban	Acre	\$ 908,134				\$	
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$	-
ROW required for Temp. Construction Easement	Acre	\$ 3,042				Ψ	_
1 Dense Urban	Acre					\$	
2 Urban	Acre					\$	-
3 Dense Suburban	Acre					\$	-
4 Suburban	Acre					\$	-
5 Undeveloped	Acre					\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acre	\$ 2,786,321				\$	
7 Urban	Acre	\$ 1,371,510				\$	
8 Dense Suburban	Acre	\$ 908,134				\$	
9 Suburban	Acre	\$ 208,418				\$	-
10 Undeveloped	Acre	\$ 3,642				\$	-
Environmental Mitigation = 3% Line Costs		1				\$	509,346
System Elements		1					
1 Signaling (ATC)	Mile	\$ 2,070,000			0.45	\$	940,909
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.45		245,455
3 Wayside Protection System	Mile	\$ 108,000			0.45	\$	49,091
Floatrification Home		1					
Electrification Items 1 Traction Power supply	Mile	\$ 1,170,000			0.45	¢	531,818
2 Traction Power Distribution	Mile	\$ 1,170,000			0.45		675,000
Subt		1,700,000			0.43	\$	19,929,824
Program Implementation Costs (per screening)						\$	5,082,105
Program Implementation Costs		1					
Contingonoios (nor sersoning) (259/)						¢	4 000 4E4
Contingencies (per screening) (25%)						\$	4,982,456
Subtotal		1	1			\$	29,994,385
Subtotal (Pounded)							30,000,000

Subtotal (Rounded) \$ 30,000,000



	4A (0.7 miles)	4B1 (1.3 miles)			4B2 (3.4 miles)		
Subsection 4	Berm	Berm	Aerial Viaduct	At Grade	Open Trench/Tunnel	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$40	\$105	\$326 (4 tracks)	\$124 (4 tracks) \$28 (2 tracks)	\$682 (4 tracks)	\$1,637 (4 tracks)	\$1,502 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Medium	Medium	Highest	Lowest	Lowest	Lowest
Notes:		Station. 2. New 28th Ave	4 tracks - 1. Raise Ralston Ave, Harbor Blvd, F St, and Holly St to smooth profile; 2. Caltrain Belmont and San Carlos stations;	stations. 2 tracks - 1. Electrification	Raise Ralston Ave, Harbor Blvd, F St, and Holly St to smooth profile; Caltrain Belmont	4 tracks - 1. Raise Ralston Ave, Harbor Blvd, F St, and Holly St to smooth profile; 2. Caltrain Belmont and San Carlos stations;	2 tracks - 1. This option would leave existing Caltrain unchanged because subsection already grade separated. 2. Must be combined with 2 track at grade option.

		4C (1.6	miles)				4D (0.6 miles)		
Subsection 4	Aerial Viaduct	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct (HST Only)	At Grade (Caltrain Only)	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$157 (4 tracks); \$111 (2 tracks)	\$325 (4 tracks)	\$765 (4 tracks)	\$336 (2 tracks)	\$30 (2 tracks)	\$7 (2 tracks)	\$105 (2 tracks)	\$152 (2 tracks)	\$121 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Medium	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest
Notes:	Redwood City station (costs not included). 2 tracks - 1. Caltrain Redwood City Station. 2. Potential HST Redwood City station	 Caltrain Redwood City Station. Potential HST Redwood City station (costs not included). Raise Jefferson Ave to smooth profile. 	City Station. 2. Potential HST Redwood City station (costs not included). 3. Paico Infforcon	2 tracks - 1. No potential HST Redwood City station. 2. Two tracks only. 3. Must be combined with 2 track aerial viaduct option.	2 tracks - 1. Convert Woodside Road overpass to underpass. 2. Two tracks only. 3. Must be combined with 2 track at grade option.	2 tracks - 1. Existing 4-track alignment. 2. Must be combined with 2 track aerial viaduct or trench or tunnel option.	1. Must be combined	2 tracks - 1. Must be combined with 2 track at grade option.	

COST ELEMENTS	UNIT	UNIT PRICE		Ber	m		
ubsection 4		Base: 2009 (3rd	Start: 1164 + 00	A End: 1200 + 00	186.0	Viles	
		Quarter)	Ottart: 11011 00	E11d. 1200 1 00	0.001	VIIICS	
ubsection Details			Ctort. 0 . 00	End: 0 + 00	Quant.	Cost	
ouble Track At-Grade (Mile) ouble Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	E110: 0 + 00	0.00 Miles 0.00 Miles		
ouble Track Lievaled (Mile)			Start: 0 + 00		0.00 Miles		
ouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
our Track Construction/Reconstruction At-Grade (Mile)			Start: 1164 + 00	End: 1182 + 00	0.34 Miles		
our Track Elevated (Mile)			Start: 1182 + 00	End: 1200 + 00	0.34 Miles		
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
our Track Trench (Mile) Double Track Section - Total	1	1	Start: 0 + 00		0.00 Miles		
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$	_
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00		-
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00		-
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	-
Four Track Section - Total							
Four-track Section - At Grade	Mile	\$ 4,200,448			0.34	\$ 1,431	I 971
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.34		
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00		-
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$	-
C: 1 T 1 T 1							
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00	¢	
6 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00		-
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0.00		-
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00		-
	1						
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0.00		-
0 Freight Single Track - At Grade	Mile	\$ 1,549,312			0.00	\$	-
Earthwork Items							
1 Site Preparation - Undeveloped	Acre	\$ 9,216			12.88	\$ 118	3,702
2 Total Cut	CY	\$ 6.00			0.00		-
3 Total Fill	CY	\$ 6.00			133333.33	\$ 800	0,000
4 Borrow	CY	\$ 13.00			133333.33		3,333
5 Spoil	CY	\$ 13.00			0.00		-
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			12.88 0.68		9,135 3,444
8 Special Drainage Facilities	5% Earl				0.00		1,481
o openial Brainage radinates	070 Ear					Ψ 111	, 10 1
Structures, Tunnels, Walls							
1 Standard Structure	Mile	\$ 34,972,672			0.34		2,502
2 High Structure	Mile	\$ 40,424,448				\$	-
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$ \$	-
5 Waterway Crossing - Finnary	Mile	\$ 92,049,408				\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	-
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	\$	-
0 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$	-
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896					
1 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$	_
2 Crossovers	ea	\$ 442,368				\$	-
3 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	\$	-
4 Trench Short	Mile	\$ 78,843,904			0.00		-
5 Trench Long	Mile	\$ 57,524,224				\$	-
6 Mechanical & Electrical for Tunnels 7 Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			0.34	\$ \$ 2,936	- 2 EE 2
8 Containment Walls	Mile	\$ 5,907,456			0.00		-
9 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			0.00	\$	-
Four Track Drill & Blast	Mile	\$ 293,775,360				\$	-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$	-
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624					
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	¢	
I OUI TIACK CUL & COVEL TUITITE!	wille	ψ ΖυΖ,49Ζ,100			0.00	Ψ	-
Grade Separations							
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			0		-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,563,520 \$ 3,593,216				\$ \$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Suburbari)	ea	\$ 2,850,816				\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$	-
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$	-
8 Minor Crossing Closures	ea	\$ 87,040				\$	-

COST ELEMENTS	UNIT	UNIT PRICE		Beri	m	
Subsection 4		Base: 2009 (3rd		Α		
		Quarter)	Start: 1164 + 00	End: 1200 + 00	0.68	Miles
Subsection Details		l			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	0031
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	F J. 1100 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 1164 + 00 Start: 1182 + 00	End: 1182 + 00 End: 1200 + 00	0.34 Miles 0.34 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	E11d. 1200 1 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -				\$ -
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade	Each Each	\$ - \$15,000,000				\$ - \$ -
Califain Passenger Station - Ar-Grade Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -
4 Parking - Structures	space					\$ -
5 Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation						
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168				\$ - \$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)						
ROW required for each segment 1 Dense Urban	Aoro	¢ 270/221				6
2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ - \$
3 Dense Suburban	Acre	\$ 908,134				\$ -
4 Suburban	Acre	\$ 208,418				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement						\$ -
1 Dense Urban 2 Urban	Acre					\$ -
3 Dense Suburban	Acre Acre					\$ -
4 Suburban	Acre					\$ -
5 Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities						
6 Dense Urban	Acre	\$ 2,786,321				\$ -
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -
9 Suburban	Acre	\$ 908,134				\$
10 Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs						\$ 674,003
Contain Floring						
System Elements 1 Signaling (ATC)	Mila	¢ 2,070,000			0 (0 M!!	¢ 1.411.37.4
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			0.68 Miles 0.68 Miles	
3 Wayside Protection System	Mile	\$ 108,000			0.68 Miles	
Electrification Items		[
1 Traction Power supply	Mile	\$ 1,170,000			0.68 Miles	
2 Traction Power Distribution	Mile	\$ 1,485,000			0.68 Miles	
Subtotal Program Implementation Costs (per screening)						\$ 26,804,187 \$ 6,835,068
Program Implementation Costs Program Implementation Costs						\$ 0,000,000
Contingencies (per screening) (25%)						\$ 6,701,047
Cubtotal	ļ	 				¢ 40.240.204
Subtotal (Pounded)						\$ 40,340,301

Subtotal (Rounded) \$ 40,000,000



COST ELEMENTS	UNIT UNIT PRICE		Berr	m			Aerial Vi	aduct			At-Grade (2 tracks)		At-Grade (4	4 tracks)	
Subsection 4	Base: 2009 (3rd Quarter)		B1				B2				B	2		B2	<u> </u>	
	,	Start: 1200 + 00 S	Start: 1270 + 00	1.33	Miles	Start: 1270 + 00	Start: 1450 + 00	3.41	Miles	Start: 1270 + 00	End: 1450 + 00	3.41 Miles	Start: 1270 + 00	End: 1450 + 00	3.41	1 Miles
Subsection Details				Quant.	Cost			Quant.	Cost			Quant. Cost			Quant.	Cost
Double Track At-Grade (Mile)		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)		Start: 0 + 00	E 1 400E 00	0.00 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles	Start: 0 + 00	F 1 0 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			End: 1235 + 00	0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)		Start: 1235 + 00 I Start: 0 + 00	End: 1270 + 00	0.66 Miles 0.00 Miles		Start: 1270 + 00 Start: 0 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	Start: 1270 + 00 Start: 0 + 00	End: 1450 + 00	3.41 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Section - Total		Start. 0 + 00		0.00 Willes		Start. 0 + 00	0.00 Miles	0.00 Wiles		Start. 0 + 00		0.00 ivines	Start. 0 + 00		0.00 Miles	
1 Double Track Section - At Grade	Mile \$ 2,100,224			0.00	-			0.00 \$	-			0.00 \$	-		0.00	\$
2 Double Track Section - On Structure	Mile \$ 4,700,160			0.00				0.00 \$				0.00 \$	-		0.00	\$
3 Double Track Section - In Tunnel or Subway	Mile \$ 4,700,160			0.00				0.00 \$	-			0.00 \$	-		0.00	\$
4 Double Track Section - In Trench	Mile \$ 4,700,160			0.00	-			0.00 \$	-			0.00 \$	-		0.00	\$
Four Track Section - Total												0.00			0.00	
Four-track Section - At Grade	Mile \$ 4,200,448			0.66				0.00 \$				0.00 \$	-		0.00	
Four-Track Section - On Structure	Mile \$ 9,400,320 Mile \$ 9,400,320			0.66				3.41 \$ 0.00 \$				0.00 \$ 0.00 \$	-		3.41 0.00	\$ 32,046,54
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile \$ 9,400,320			0.00				0.00 \$				0.00 \$			0.00	
TOUR TRACK SECTION - IN TREMENT	Willie \$ 9,400,320			0.00	-			0.00 \$	-			υ.υυ φ			0.00	Ψ
Single Track - Total																
5 Single Track Section - At Grade	Mile \$ 1,549,312			0.00	-			0.00 \$	-			0.00 \$	-		0.00	\$
6 Single Track Section - On structure	Mile \$ 2,350,080			0.00				0.00 \$				0.00 \$	-		0.00	
7 Single Track Section - In Tunnel or Subway	Mile \$ 2,350,080			0.00	-			0.00 \$				0.00 \$	-		0.00	
8 Single Track Section - In Trench	Mile \$ 2,350,080			0.00	-			0.00 \$	-			0.00 \$	-		0.00	\$
9 Freight Double Track - At Grade	Mile \$ 2,839,552			0.00				0.00 \$				0.00 \$	-		0.00	
10 Freight Single Track - At Grade	Mile \$ 1,549,312			0.00	-			0.00 \$	-			0.00 \$	-		0.00	\$
Forthwork Itomo																
Earthwork Items	Apro 6 0.21/			0.00	•			0.00				0.00			0.00	¢
1 Site Preparation - Undeveloped 2 Total Cut	Acre \$ 9,216 CY \$ 6.00			0.00				0.00 \$				0.00 \$ 0.00 \$	-		0.00 0.00	
2 Total Cut 3 Total Fill	CY \$ 6.00 CY \$ 6.00			259259.26				0.00 \$				0.00 \$			0.00	
4 Borrow	CY \$ 0.00 CY \$ 13.00			259259.26				0.00 \$				0.00 \$	-		0.00	
5 Spoil	CY \$ 13.00			0.00				0.00 \$				0.00 \$	-		0.00	
6 Landscape erosion Control	Acre \$ 6,144			0.00				0.00 \$	-			0.00 \$	-		0.00	
7 Security Fencing (Both sides of ROW)	Mile \$ 144,384			0.66				0.00 \$	-			0.00 \$	-		0.00	
8 Special Drainage Facilities	5% Earthwork				251,082			\$	-			\$	-			\$
Structures, Tunnels, Walls	1.00							[<u></u>	440.00=			2 22 4				•
1 Standard Structure	Mile \$ 34,972,672			0.66	\$ 23,182,642			3.41 \$	119,225,018			0.00 \$	-			\$
2 High Structure	Mile \$ 40,424,448			[3	-				-			\$	-			\$
3 Long Span Structure	Mile \$ 61,919,232 Mile \$ 85,342,208			13	- ·				-			3	-			Þ
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile \$ 85,342,208 Mile \$ 92,049,408				p -				:			•				\$
6 Twin Single Track Drill&Blast (<6 Miles)	Mile \$ 92,049,408 Mile \$ 142,731,264			[;	-				·			\ \sigma	_			\$
7 Twin Single Track Diliablast (<0 Miles)	Mile \$ 106,637,312			[:	· -				- -			\$	-			\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile \$ 176,720,896			[:	-			l s	-			\$	-			\$
9 Double Track Drill & Blast	Mile \$ 146,887,680			0.00	\$ -			0.00 \$	-			0.00 \$	-		0.00	\$
10 Double Track Mined (Soft Soil)	Mile \$ 792,000,000			!	-				-			\$	-			\$
Double Track TBM (<6 Miles)	Mile \$ 106,637,312															
Double Track TBM w/3rd Tube (>6 Miles)	Mile \$ 176,720,896															
11 Seismic Chamber (Drill & Blast/Mined)	ea \$ 126,205,952			[;	-			\$	-			\$	-			\$
12 Crossovers	ea \$ 442,368			0.00	-			\$ 0.00	-			\$ 0.00	-		0.00	\$
13 Cut & Cover Double Track Tunnel	Mile \$ 131,246,080 Mile \$ 78,843,904			0.00				0.00 \$ 0.00 \$				0.00 \$	-		0.00	
14 Trench Short 15 Trench Long	Mile \$ 78,843,904 Mile \$ 57,524,224			0.00	- \$			0.00 \$	- :			0.00 \$	-		0.00	\$ \$
16 Mechanical & Electrical for Tunnels	Mile \$ 57,524,224 Mile \$ 11,848,704			[;	- ·				· -			\$	-			\$
17 Retaining Walls	Mile \$ 11,646,704			0.66	\$ 5,709,964			0.00 \$				0.00 \$	-		0.00	\$
18 Containment Walls	Mile \$ 5,907,456			0.00	5,707,704			0.00 \$				0.00 \$	-		0.00	
19 Single Track Cut and Cover Subway	Mile \$ 131,246,080			0.00				5.55	-			\$	-		5.55	\$
Four Track Drill & Blast	Mile \$ 293,775,360			[]	-			l s	-			\$	-			\$
Four Track Mined (Soft Soil)	Mile \$ 1,584,000,000			[]	\$ -			\$	-			\$	-			\$
Four Track TBM (<6 Miles)	Mile \$ 213,274,624															
Four Track TBM w/3rd Tube (>6 Miles)	Mile \$ 353,441,792															
Four Track Cut & Cover Tunnel	Mile \$ 262,492,160			0.00	-			0.00 \$	-			0.00 \$	-		0.00	\$
Crada Sanarations																
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea \$ 13,284,352			Ι.				•	:			•	_			\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea \$ 13,284,352 ea \$ 19,926,528			: ام	,			"	·			0 8	-		٥	\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea \$ 2,759,680			1	\$ 2,759,680			d \$	11,038,720			\\ \cdot\ \\ \cdot\ \	-		l "l	\$
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Judeveloped)	ea \$ 2,029,568			' ;	£,737,000 } -			" "	- 11,030,720			\$	-			\$
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea \$ 3,563,520			[]					- -			\$	-			\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea \$ 3,593,216			[]					-			\$	-			\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea \$ 2,850,816			[]	-			l s	-			\$	-			\$
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea \$ 3,171,328			[]					-			\$	-			\$
7 Street Bridging HSR Trench	ea \$ 1,398,784			[]	-			l s	-			\$	-			\$
8 Minor Crossing Closures	ea \$ 87,040			[]	\$ -			\$	-			\$	-			\$
								. 1 *		Ī	i l	·	i	i	1	

COST ELEMENTS	UN	T UNIT PRICE					Aerial Vi	iaduct			At-Grade (2 tracks)			At-Grade (4	4 tracks)		
Subsection 4		Base: 2009 (3rd		B1				Do)			D.)			B2		
		Quarter)	Start: 1200 + 00	Start: 1270 + 00	1.33 Miles		Start: 1270 + 00	B2 Start: 1450 + 00		1 Miles	Start: 1270 + 00	End: 1450 + 00		Miles	Start: 1270 + 00	End: 1450 + 00		1 Miles
			Start: 1200 1 00	Start: 1270 1 00	1.50 Miles		Start: 1270 + 00	Otart. 1100 1 00	0.1	Times	Start: 1270 1 00	End. 1100 1 00	0.11	William	Start: 1270 + 00	E11a. 1100 1 00	0.1	Times
Subsection Details			61 1 0 00			Cost	CL 1 0 00	61 1 0 00	Quant.	Cost	CI 4070 00	E 4450 00	Quant.	Cost	61 1 0 00	F 1 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00		00 Miles 00 Miles	-	Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 12/0 + 00 Start: 0 + 00	End: 1450 + 00	3.41 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	-
Double Track Tunnel (Mile)			Start: 0 + 00		00 Miles	-	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		00 Miles	•	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 1235 + 00		66 Miles	-	Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		00 Miles 00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	-
Building Items			Start. 0 + 00	0.0	oo iviiles		Start. 0 + 00	0.00 Miles	0.00 Miles		Start. 0 + 00		0.00 Miles		Start. 0 + 00		0.00 Wiles	
1 Intermediate Passenger Stations	Eac	h \$ -			\$	-				\$ -				\$ -				\$
2 Terminal Passenger Stations	Eac				\$	-				\$ -				\$ -				\$
Caltrain Passenger Station - At-Grade	Eac				\$	-				\$ -			0	-			2	\$ 30,000,000
Caltrain Passenger Station - On Structure 2 Caltrain Passenger Station - In Tunnel or Subway	Eac Eac				1 \$	15,000,000			2	\$ 30,000,000				\$ -				\$
Caltrain Passenger Station - In Trench	Eac				\$	-				\$ -				\$ -				\$
3 Maintenance Facility	Eac				\$	-				\$ -				\$ -				\$
4 Parking - Structures	spa	ce \$ -	- [\$	-				\$ -				\$ -				\$
5 Parking - At Grade	spa	ce \$ -	•		\$	-				\$ -				\$ -				\$
Deit of thillier Delegation			1															
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896	Л		· ·				1	\$				\$				\$
2 Single Track Relocation (Permanent)	Mile				\$	-				\$ -				\$ -				\$
3 Single Track Removal	Mile				\$	-				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile		1		\$	-				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile				\$	-				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile				\$	-				\$ -				\$ -				-
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile				\$	-				\$ -				- ¢				\$ -
oliviajor otility Relocations - orideveloped	IVIIIC	\$ 30,720			φ	-				-				-				-
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre				\$	-				\$ -				-				-
2 Urban	Acre				\$	-				\$ -				-				-
3 Dense Suburban 4 Suburban	Acre Acre				\$	-				•				\$ -				
5 Undeveloped	Acre				\$	-				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement		, ,,,,,			\$	-				\$ -				\$ -				\$ -
1 Dense Urban	Acre				\$	-				В				В				В
2 Urban	Acre				\$	-				\$ -				-				-
3 Dense Suburban	Acre				\$	-				\$ -				-				-
4 Suburban 5 Undeveloped	Acre Acre				\$	-				\$ -				\$ -				\$
Right-of-Way Required for Stations, Maintenance & Parking Facilities	/\Circ				*					*				*				Ψ
6 Dense Urban	Acre				\$	-				\$ -				\$ -				\$
7 Urban	Acre				\$	-				\$ -				\$ -				\$ -
8 Dense Suburban	Acre				\$	-				\$ -				-				\$ -
9 Suburban 10 Undeveloped	Acre Acre				\$	-				\$ -				- 4				\$
Environmental Mitigation = 3% Line Costs	ACTE	3,042			\$	1,828,220				\$ 5,769,309				\$ -				\$ 1,861,396
						,				,,,								1,221,370
System Elements		1.	1						1									
1 Signaling (ATC)	Mile				1.33 \$	2,744,318			3.41				3.41				3.41	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile				1.33 \$ 1.33 \$	715,909 143,182			3.41 3.41				3.41 3.41				3.41 3.41	
Syvayside Fiolection System	IVIIIe	\$ 100,000	1		1.33 \$	143,102			3.41	φ 300,182			3.41	ψ 300,182			3.41	φ 300,182
Electrification Items																		
1 Traction Power supply	Mile				1.33 \$	1,551,136			3.41				3.41				3.41	
2 Traction Power Distribution	Mile	\$ 1,485,000	1		1.33 \$	1,968,750			3.41				3.41				3.41	
	Subtotal		1			69,892,179				\$ 216,396,638				\$ 18,317,045				\$ 82,224,987
Program Implementation Costs (per screening) Program Implementation Costs			1		3	17,822,506				\$ 55,181,143				\$ 4,670,847				\$ 20,967,372
1 Togram implementation 000t5																		
Contingencies (per screening) (25%)					\$	17,473,045				\$ 54,099,159				\$ 4,579,261				\$ 20,556,247
College			1	<u> </u>		405 403 305			1	A 005 (7(0:-		1		A 07.57.5-5		<u> </u>	<u> </u>	A 400 710 17
Subtotal (December)						105,187,729				\$ 325,676,940				\$ 27,567,153				\$ 123,748,606

COST ELEMENTS	UNIT	UNIT PRICE		Open	Trench			Covere	ed Trench			runnel	(HST only)	
ubsection 4		Base: 2009 (3rd Quarter)		F	32				B2				B2	
		Quality)	Start: 1270 + 00	Start: 1450 + 00	3.41 N	Miles	Start: 1270 + 00	Start: 1450 + 00	3.41 N	liles	Start: 1270 + 00	Start: 1450 + 00	3.41 M	liles
heartian Dataile					Quant.	Cost			Quant.	Cost			Quant.	Cost
ubsection Details ouble Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles	CUSI	Start: 0 + 00	Start: 0 + 00	0.00 Miles	CUSI	Start: 0 + 00	Start: 0 + 00	0.00 Miles	COSI
puble Track Elevated (Mile)			Start: 0 + 00	Start: 0 1 00	0.00 Miles		Start: 0 + 00	Start. 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 1 00	0.00 Miles	
puble Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
ouble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Tunnel (Mile) our Track Trench (Mile)		ŀ	Start: 0 + 00 Start: 1270 + 00	End: 1450 + 00	0.00 Miles 3.41 Miles		Start: 1270 + 00 Start: 0 + 00	End: 1450 + 00	3.41 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total			Start. 1270 + 00	LIIU. 1430 + 00	3.41 WIIIeS		Start. 0 + 00		0.00 Miles		Start. 0 + 00		0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$ -			0.00 \$	-			0.00 \$	
2 Double Track Section - On Structure	1	\$ 4,700,160			0.00				0.00 \$	-			0.00 \$	
3 Double Track Section - In Tunnel or Subway		\$ 4,700,160			0.00				0.00 \$	-			3.41 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0.00 \$	
Farm Tarak Castian Takak														
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	φ.			0.00 ¢				0.00 ¢	
Four-Track Section - At Grade Four-Track Section - On Structure		\$ 4,200,448 \$ 9,400,320			0.00				0.00 \$				0.00 \$ 0.00 \$	
Four-Track Section - In Tunnel or Subway		\$ 9,400,320			0	*			3.41 \$				0.00 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			3.41	\$ 32,046,545			0 \$				0 \$	
	TVIIIC	- 7,100,020			5.71	. 02,010,010			9					
Single Track - Total														
Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0 \$	-			0 \$	
Single Track Section - On structure		\$ 2,350,080			0	\$ -			0 \$	-			0 \$	
Single Track Section - In Tunnel or Subway		\$ 2,350,080			0	\$ -			0 \$	-			0 \$	
Single Track Section - In Trench	Mile	\$ 2,350,080			0 :	-			0 \$	-			0 \$	
Freight Double Track - At Grade	Mile	\$ 2,839,552				¢			0 \$				0 4	
Freight Single Track - At Grade		\$ 2,839,552 \$ 1,549,312			ol :	\$ -			0 \$	-			0 \$	
	IVIIIC	Ψ 1,0 1 7,012			3	-			9	-				
Earthwork Items														
Site Preparation - Undeveloped	Acre	\$ 9,216			45.45	\$ 418,909			45.45 \$	418,909			0.00 \$	
Total Cut		\$ 6.00			1466666.67				1466666.67 \$				0.00 \$	
Total Fill	1 -	\$ 6.00			0.00	\$ -			\$	-			0.00 \$	
Borrow		\$ 13.00			0.00	\$ -			0.00 \$	-			0.00 \$	
5 Spoil		\$ 13.00			1466666.67				1466666.67 \$	19,066,667			0.00 \$	
6 Landscape erosion Control		\$ 6,144			45.45				45.45 \$				0.00 \$	
7 Security Fencing (Both sides of ROW)		\$ 144,384			3.41				0.00 \$				0.00 \$	
B Special Drainage Facilities	5% Earth	hwork			1	\$ 1,452,853			\$	1,428,242			\$	
Structures, Tunnels, Walls														
Standard Structure	Mile	\$ 34,972,672			0.00	¢ .			0.00 \$				0.00 \$	
2 High Structure		\$ 40,424,448			0.00	φ - \$ _			0.00 \$	-			0.00 \$	
Long Span Structure		\$ 61,919,232				\$ -			\$	_			\$	
4 Waterway Crossing - Primary		\$ 85,342,208				\$ -			\$	_			\$	
Waterway Crossing - Secondary (Irrigation Canal)	1	\$ 92,049,408				\$ -			\$	-			\$	
Twin Single Track Drill&Blast (<6 Miles)		\$ 142,731,264				\$ -			\$	-			\$	
Twin Single Track TBM (<6 Miles)		\$ 106,637,312				\$ -			\$	-			\$	
Twin Single Track TBM w/3rd Tube (<6 Miles)		\$ 176,720,896			[:	\$ -			\$	-			\$	
Double Track Drill & Blast		\$ 146,887,680			0.00	\$ -			0.00 \$	-			0.00 \$	
Double Track Mined (Soft Soil)		\$ 792,000,000			[:	\$ -			\$	-			0.76 \$	601,20
Double Track TBM (<6 Miles)		\$ 106,637,312											2.65 \$	282,5
Double Track TBM w/3rd Tube (>6 Miles)		\$ 176,720,896												
Seismic Chamber (Drill & Blast/Mined)		\$ 126,205,952			[]	\$ -			\$	-			\$	
Crossovers Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0.00	- ¢			0.00 \$	-			0.00	
Trench Short		\$ 131,246,080 \$ 78,843,904			0.00 3.41				0.00 \$	-			0.00 \$ 0.00 \$	
Trench Long		\$ 78,843,904 \$ 57,524,224			3.41	\$ 200,700,030 \$			0.00 \$	-			0.00 \$	
Mechanical & Electrical for Tunnels		\$ 57,524,224 \$ 11,848,704				\$ -			3.41 \$	40,393,309			3.41 \$	40,3
Retaining Walls		\$ 8,613,888			3.41	\$ 29,365,527			0.00 \$				0.00 \$	
Containment Walls		\$ 5,907,456			3.41				0.00 \$				0.00 \$	
Single Track Cut and Cover Subway		\$ 131,246,080			5.71	\$ -			\$	-			0.00 \$	
Four Track Orill & Blast	1	\$ 293,775,360				\$ -			Š	-			I s	
Four Track Mined (Soft Soil)		\$ 1,584,000,000				\$ -			\$	-			ľ	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624											0.00 \$	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792											\$	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -			3.41 \$	894,859,636			0.00 \$	
Conde Consentions														
Grade Separations		¢ 10.004.050				ф								
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)		\$ 13,284,352				-			\$	-			\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)		\$ 19,926,528			.1.3	• 11 000 700			15	11 020 720			4 3	11.00
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)		\$ 2,759,680			4	\$ 11,038,720			4 \$	11,038,720			4 \$	11,03
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)		\$ 2,029,568 \$ 3,563,520				φ -			\$	-			\$	
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Orban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)		\$ 3,563,520 \$ 3,593,216			[]	φ - ¢			2	-			1 3	
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)		\$ 3,593,216 \$ 2,850,816			[]	φ - \$			2	-			1 3	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)		\$ 2,850,816				y - \$			\$	-			\$	
Street Bridging HSR Trench		\$ 3,171,328 \$ 1,398,784			nl :	\$ -			0 \$	-			0 \$	
Minor Crossing Closures		\$ 87,040			3	\$ -			0 \$	-			0 \$	
		. 37,010		i			1	i l			i I		υ Ψ	

Carrier Carr	COST ELEMENTS	l	NIT UNIT	PRICE		Open T	Trench			Cover	red Trench			Tunnel	(HST only)	
Secretar Public Secretar P	Subsection 4					R	2				R2				R2	
Color From A principal			Qu	ai (ei)	Start: 1270 + 00			Miles	Start: 1270 + 00	Start: 1450 + 00		1 Miles	Start: 1270 + 00			Miles
Color From A principal	Subsection Details						Quant	Cost			Quant	Cost			Quant	Cost
Transfer from Marke 1982 1	Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00		0031	Start: 0 + 00	Start: 0 + 00		COSt	Start: 0 + 00	Start: 0 + 00		0031
Section Floring Section (1988) Secti														End: 1450 ± 00		
Part Table Part	Double Track Trench (Mile)															
The first part of the content of the						End: 0 + 00										
Position	Four Track Elevated (Mile)															
International Extension Clarks	Four Track Trench (Mile)				Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
2 cmm1		l _E	ach \$	_				\$ -				\$ -			\$	-
Column Francings Californ Cut States S S S S S S S S S	2 Terminal Passenger Stations	E	ach \$	-				\$ -				\$ -			\$	-
2 Cartiful Processing Cartinol - To train or Springly								\$ - ¢				-			\$	=
Sharkeners (Falley Early 213/25/1044 5								\$ -				\$ -			0 \$	- -
Contract							2	\$ 30,000,000			2	\$ 30,000,000				
Simple Section Secti				3,921,884				\$ - \$ -				\$ -			\$	-
Simple Task Servative (Tempurary)				-				\$ -				\$ -			\$	-
Simple Task Servative (Tempurary)	Rail & Utility Relocation															
Single risk Network	1 Single Track Relocation (Temporary)	M						\$ -				\$ -			\$	-
Abject Willing Recordings - Delivery Water Mile \$ 1,542.288 \$ \$. \$ 5 . \$ \$. \$.								\$ -				\$ -			\$	=
Soliday Table Soliday Solida								\$ -				\$ -			\$	- -
Topic May Topic	5 Major Utility Relocations - Urban	M	ile \$	1,084,416				\$ -				\$ -			\$	-
Biology (city) Relocation-charded Nile \$ 30.720	6 Major Utility Relocations - Dense Suburban							\$ -				-			\$	-
Root required for each segment Aze \$ 2,738,321 \$ \$.								\$ -				\$ -			\$	-
Root required for each segment Aze \$ 2,738,321 \$ \$.	2011/21/21															
Description	ROW (Not Included) ROW required for each segment															
2 Dames Suburban	1 Dense Urban							\$ -				\$ -			\$	-
Assubation				1,371,510				\$ -				- •			\$	-
ROW required for Temp. Construction Exsement Acre Acre S S S S S S S S S								\$ -				\$ -			\$	-
Dorso Ubdan		A	cre \$	3,642				-				\$ -			\$	-
2 Urban		l _A	cre					\$ -				\$ -			\$	- -
Subtotation	2 Urban	A	cre					\$ -				\$ -			\$	-
Subtolar								\$ •				-			\$	-
Acre \$ 2,786,321 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$								\$ -				\$ -			\$	-
Value		١.		0.707.004				A				•				
Solution								\$ -				\$ -			\$	- -
10 Undeveloped	8 Dense Suburban	A	cre \$	908,134				\$ -				\$ -			\$	-
Environmental Miligation = 3% Line Costs System Elements 1 Signaling (ATC) 2 Communications (W Fiber Optic Backbone) 3 Wayside Protection System 4 Mile \$ 2,070,000 3 Wayside Protection System 4 Mile \$ 1,000 3 At \$ 1,840,909 3 Wayside Protection System 5 In Traction Power Supply 6 Traction Power Distribution 7 Orgam Implementation Costs (per screening) 8 11,170,000 1 3 41 \$ 1,840,909 3 41 \$ 3,988,636 3 41 \$ 3,								\$ •				-			\$	-
Signaling (ATC)			J.C \$	3,042				\$ 12,656,574				*			\$	28,537,325
Signaling (ATC)	System Flaments															
2 Communications (W Fiber Optic Backbone) 3 Wayside Protection System Mile \$ 540,000 Mile \$ 108,000 \$ 3.41 \$ 1,840,909 \$ 3.41 \$ 1,840,909 \$ 3.41 \$ 1,840,909 \$ 3.41 \$ 1,840,909 \$ 3.41 \$ 368,182 \$ 368,182 \$ 3.41 \$ 368,182 \$ 3.41 \$ 3.68,182 \$ 3.41 \$	1 Signaling (ATC)	М	ile \$	2,070,000			3.41	\$ 7,056,818			3.41	\$ 7,056,818			3.41 \$	7,056,818
Electrification Items Traction Power supply Traction Power Supply Traction Power Distribution Subtotal Subtot	2 Communications (w/ Fiber Optic Backbone)	M	ile \$	540,000			3.41	\$ 1,840,909			3.41	\$ 1,840,909			3.41 \$	1,840,909
1 Traction Power supply 2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) Program Implementation Costs Contingencies (per screening) (25%) Subtotal Mile 1,170,000 Mile 1,485,000 Mi	3 wayside Protection System	M	iie \$	108,000			3.41	\$ 368,182			3.41	\$ 368,182			3.41 \$	368,182
2 Traction Power Distribution Subtotal Program Implementation Costs (per screening) (25%) Subtotal Subtotal Subtotal Subtotal Program Implementation Costs (per screening) (25%) Subtotal Subtot			.													
Program Implementation Costs (per screening) \$ 452,859,423 \$ 115,479,153 \$ 1,087,798,286 \$ 277,388,563 \$ 998,098,549 \$ 254,515,130 Program Implementation Costs \$ 113,214,856 \$ 271,949,572 \$ 249,524,637 Subtotal \$ 681,553,432 \$ 1,637,136,421 \$ 1,502,138,317																
Program Implementation Costs \$ 113,214,856 \$ 271,949,572 \$ 249,524,637 Contingencies (per screening) (25%) \$ 681,553,432 \$ 1,637,136,421 \$ 1,502,138,317			IIC P	1,400,000			3.41	\$ 452,859,423			3.41	\$ 1,087,798,286				
Contingencies (per screening) (25%) \$ 113,214,856 \$ 271,949,572 \$ 249,524,637 Subtotal \$ 681,553,432 \$ 1,637,136,421 \$ 1,502,138,317								\$ 115,479,153				\$ 277,388,563			\$	254,515,130
Subtotal \$ 681,553,432 \$ 1,637,136,421 \$ 1,502,138,317	Program implementation Costs															
	Contingencies (per screening) (25%)							\$ 113,214,856				\$ 271,949,572			\$	249,524,637
		·	<u> </u>												\$	1,502,138,317

COST ELEMENTS	UNIT			Aerial Viaduo	ct (4 Tracks)			Aerial Viaduo	t (2 Tracks)		Open 1	rench			Cover	ed Trench	
Subsection 4		Base: 2009 (3rd			•				· · · · · · · · · · · · · · · · · · ·							C	
		Quarter)	Start: 1450 + 00	Start: 1533 + 00	1.57 [Miles	Start: 1450 + 00	Start: 1533 + 00	1.57 N	Miles	Start: 1450 + 00 Start: 1533 + 00	1.57 Mile	PS	Start: 1450 + 00	Start: 1533 + 00	1.57	Miles
		<u> </u>	otal t. 1400 ± 00	Start. 1935 ± 00	1.371	vinico	Start. 1450 ± 00	Start. 1955 ± 00	1.37 1	VIIICO	Start. 1950 ± 00 Start. 1955 ± 00	1.57 IVIII	u a	Start. 1450 ± 00	Jtart. 1999 + 00	1.37	wiilcə
Subsection Details					Quant.	Cost	2		Quant.	Cost		Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)		<u> </u>	Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1450 + 00	Start: 0 + 00 End: 1533 + 00	0.00 Miles 1.57 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)		<u> </u>	Start: 0 + 00	 	0.00 Miles	ŀ	Start: 1450 + 00	LIIU. 1955 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	Ţ	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)		 	Start: 1450 + 00 Start: 0 + 00	End: 1533 + 00	1.57 Miles 0.00 Miles	}	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1450 + 00	End: 1533 + 00	0.00 Miles 1.57 Miles	
Four Track Trench (Mile)			Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 1450 + 00 End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224		_	0.00	•		_	0.00	•		0.00 \$				0.00	-
2 Double Track Section - At Grade 2 Double Track Section - On Structure	Mile	\$ 2,100,224 \$ 4,700,160		1	0.00				0.00 1.57			0.00 \$	-			0.00	- }
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00	\$ -			0.00	\$ -		0.00 \$	-			0.00	-
4 Double Track Section - In Trench	Mile	\$ 4,700,160		1	0.00	\$ -			0.00	\$ -		0.00 \$	-			0.00	-
Four Track Section - Total																	
Four-track Section - At Grade	Mile	\$ 4,200,448		1	0.00				0.00			0.00 \$	-			0.00	-
Four Track Section - On Structure	Mile Mile	\$ 9,400,320 \$ 9,400,320		1	1.57 0.00			1	0.00 0.00			0 \$	-			0 S 1.57 S	- \$ 14,777,018
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile	\$ 9,400,320 \$ 9,400,320			0.00				0.00			1.57 \$	14,777,018			0.57	, 14,///,UI8 } -
		. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1	0.50	•			0.00	,		,	,,010				
Single Track Section At Crade	N ALL-	¢ 1E40.010		1	0.00	¢			0.00	¢							•
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080			0.00				0.00 0.00			0 \$ 0 \$	-			0 3	-
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080		1	0.00	\$ -		1	0.00	\$ -		0 \$	-			0 3	-
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00	-			0.00	\$ -		0 \$	-			0 5	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552		1	0.00	s - l			0.00	\$ -		0 \$	-			٥	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312		1	0.00				0.00			0 \$	-			0 3	-
				1													
Earthwork Items 1 Site Preparation - Undeveloped	Acre	\$ 9,216		1	0.00	¢		1	0.00	*		20.96 \$	193,164			20.96	193,164
2 Total Cut	CY	\$ 9,216		1	0.00			1	0.00	\$ -		676296.30 \$	4,057,778			676296.30	4,057,778
3 Total Fill	CY	\$ 6.00		1	0.00	\$ -		1	0.00	\$ -		0.00 \$	-			5	-
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00		1	0.00 0.00			1	0.00 0.00			0.00 \$ 676296.30 \$	- 8,791,852			0.00 \$ 676296.30 \$	8,791,852
6 Landscape erosion Control	Acre	\$ 6,144		1	0.00				0.00			20.96 \$	128,776			20.96	8,791,852 128,776
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384		1	0.00			1	0.00			1.57 \$	226,967			0.00	-
8 Special Drainage Facilities	5% Earth	nwork		1		\$ -				\$ -		\$	669,927				658,578
Structures, Tunnels, Walls				1													
1 Standard Structure (assume cost for 2 track is 60% of unit cost)	Mile	\$ 34,972,672			1.57	\$ 54,975,981			1.57	\$ 32,985,588		0.00 \$	-			0.00	-
2 High Structure	Mile Mile	\$ 40,424,448		1		\$ -		1		\$ -		\$	-				-
3 Long Span Structure 4 Waterway Crossing - Primary	Mile	\$ 61,919,232 \$ 85,342,208				• -				-		\$	-				-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408		1		\$ -				\$ -		\$	-				-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264 \$ 106,627,212		1		\$ -		1		\$ ¢		\$	-				-
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896		1		\$ - \$				\$ -		\$	-				- }
9 Double Track Drill & Blast	Mile	\$ 146,887,680		1	0.00	\$ -			0.00	\$ -		0.00 \$	-			0.00	-
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000		1		\$ -		1		\$ -		\$	-				-
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896															
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952		1		\$ -				\$ -		\$	-				-
12 Crossovers	ea	\$ 442,368		1	0.00	\$ -		1	2.22	\$ -		\$	-			2.00	-
13 Cut & Cover Double Track Tunnel 14 Trench Short	Mile Mile	\$ 131,246,080 \$ 78,843,904			0.00				0.00			0.00 \$ 1.57 \$	123,940,228			0.00 S	
15 Trench Long	Mile	\$ 57,524,224		1	0.50	\$ -		1	0.00	\$ -		, \$				5	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704		1		\$ -		1	2.25	\$ -		\$	10 5 40 77 :			1.57	18,625,804
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456		1	0.00 0.00				0.00 0.00			1.57 \$ 1.57 \$	13,540,771 9,286,342			0.00 S 0.00 S	- -
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080		1	0.00	\$ -		1	0.00	\$ -		1.37				0.00	-
Four Track Drill & Blast	Mile	\$ 293,775,360		1		\$ -		1		\$ -		\$	-				-
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624		1		\$ -				> -		\$	-				-
Four Track TBM (<0 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792		1				1									
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -			0.00	\$ -		0.00 \$	-			1.57	\$ 412,629,721
Grade Separations				1													
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352		1		\$ -		1		\$ -		\$	-				-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528		1	0			1	0			\$	-				-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			3	\$ 8,279,040			3	\$ 8,279,040		0 \$	-			0 5	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520		1		\$ - \$ -		1		\$ - \$		3 \$	10,690,560			3	- \$ 10,690,560
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216		1		\$ -		1		\$ -		\$					
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -				-		\$	-				-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784		1		\$ -				\$ - \$		\$	-				5 - 5
8 Minor Crossing Closures		\$ 1,398,784 \$ 87,040		1		\$ -		1		\$ -		\$	-			0 3	-
		, , , , ,		[1			[*				1	
									•		. '	•				•	

COST ELEMENTS	UNIT UNIT PRICE		Aerial Viaduc	t (4 Tracks)			Aerial Viaduo	ct (2 Tracks)			Open	Trench			Covered Trench	
Subsection 4	Base: 2009 (3rd		C				0	,				C			C	
	Quarter)	Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		Start: 1450 + 00	Start: 1533 + 00	1 57	Miles	Start: 1450 + 00	Start: 1533 + 00	1.57	Milos	Start: 1450 + 00 Start: 153	2 , 00 1	57 Miles
		Start. 1430 + 00	Start. 1333 + 00	1.07 Willes		Start. 1430 + 00	Start. 1955 + 00	1.37	Willes	Start. 1400 + 00	Start. 1955 + 00	1.07	Willes	Start. 1400 + 00 Start. 100	3+00 1.	37 Willes
Subsection Details	<u> </u>			Quant.	Cost			Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)		Start: 0 + 00	Start: 0 + 00	0.00 Miles	0001	Start: 0 + 00	Start: 0 + 00	0.00 Miles	0001	Start: 0 + 00	Start: 0 + 00	0.00 Miles	0001	Start: 0 + 00 Start: 0		0001
Double Track Elevated (Mile)		Start: 0 + 00		0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0		
Four Track Elevated (Mile)		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)		Start: 0 + 00	0.00 141	0.00 Miles		Start: 0 + 00	0.00.1411	0.00 Miles		Start: 0 + 00	E 1.4500 00	0.00 Miles		Start: 1450 + 00 End: 153		
Four Track Trench (Mile) Building Items		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00	0.00 Miles	
1 Intermediate Passenger Stations	Each \$ -			•					¢				¢			¢
2 Terminal Passenger Stations	Each \$			\$	-				\$ -				\$			\$
Caltrain Passenger Station - At-Grade	Each \$15,000,000			\$	_				\$ -				\$ -			\$ -
Caltrain Passenger Station - On Structure	Each \$15,000,000			1 \$	15,000,000			1	\$ 15,000,000)			\$ -			\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each \$15,000,000			\$	-				\$ -				\$ -			\$ -
Caltrain Passenger Station - In Trench	Each \$15,000,000			\$	-				\$ -			1	\$ 15,000,000			1 \$ 15,000,000
3 Maintenance Facility	Each \$ 123,921,884			\$	-				\$ -	-			\$ -			\$ -
4 Parking - Structures	space \$ -			\$	-				\$ -	-			\$			\$ -
5 Parking - At Grade	space \$ -			\$	-				\$ -	-	1		\$			\$ -
											1					
Rail & Utility Relocation																
1 Single Track Relocation (Temporary)	Mile \$ 2,000,896			\$	-				\$ -	-	1		\$ -			-
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile \$ 2,000,896 Mile \$ 130,048			\$	-				\$ -	-			\$ -			-
4 Major Utility Relocations - Dense Urban	Mile \$ 1,548,288			\$	-				- 0	-			•			-
5 Major Utility Relocations - Urban	Mile \$ 1,084,416			\$	-				•				•			•
6 Major Utility Relocations - Orban	Mile \$ 775,168			Š	-				\$ -				\$			\$
7 Major Utility Relocations - Suburban	Mile \$ 464,896			\$	-				\$ -				\$ -			\$ -
8 Major Utility Relocations - Undeveloped	Mile \$ 30,720			\$	-				\$ -				\$ -			\$ -
ROW (Not Included)																
ROW required for each segment																
1 Dense Urban	Acre \$ 2,786,321			\$	-				\$ -				\$			\$ -
2 Urban	Acre \$ 1,371,510			\$	-				\$ -				\$			\$ -
3 Dense Suburban	Acre \$ 908,134			\$	-				-				\$			-
4 Suburban	Acre \$ 208,418			\$	-				-				\$ -			-
5 Undeveloped ROW required for Temp. Construction Easement	Acre \$ 3,642			\$	-				-	•			-			-
1 Dense Urban	Acre			\$ D	-				- D	•			•			\$ -
2 Urban	Acre			D ¢					¢ .				•			•
3 Dense Suburban	Acre			\$					\$ -				\$			•
4 Suburban	Acre			\$					\$ -				\$ -			\$ -
5 Undeveloped	Acre			\$	-				\$ -				\$ -			\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																
6 Dense Urban	Acre \$ 2,786,321			\$	-				\$ -	1			\$			\$ -
7 Urban	Acre \$ 1,371,510			\$					\$ -				\$			-
8 Dense Suburban	Acre \$ 908,134			\$					-				\$			-
9 Suburban	Acre \$ 208,418			\$					\$ -				\$			\$ -
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre \$ 3,642			\$	2 700 071				\$ 1,000 E04				\$ 4,020,101			\$ 14 577 500
Litvironinental ivillyation = 5% Line COStS				\$	2,790,961				\$ 1,909,594	1	1		\$ 6,039,101			\$ 14,566,598
System Elements											1					
1 Signaling (ATC)	Mile \$ 2,070,000			1.57 \$	3,253,977			1.57	\$ 3,253,977	,	1	1.57	\$ 3,253,977		1.5	7 \$ 3,253,977
2 Communications (w/ Fiber Optic Backbone)	Mile \$ 540,000			1.57 \$	848,864			1.57			1	1.57			1.5	
3 Wayside Protection System	Mile \$ 108,000			1.57 \$	169,773			1.57			1	1.57	\$ 169,773		1.5	7 \$ 169,773
											1					
Electrification Items											1	j				
1 Traction Power supply	Mile \$ 1,170,000			1.57 \$	1,839,205			1.57			1	1.57			1.5	
2 Traction Power Distribution	Mile \$ 1,485,000			1.57 \$	2,334,375			1.57			1	1.57			1.5	7 \$ 2,334,375
Subto	otal			\$	104,269,193				\$ 74,008,925				\$ 215,788,677			\$ 508,566,041
Program Implementation Costs (per screening)				\$	26,588,644				\$ 18,872,276)	1		\$ 55,026,113			\$ 129,684,341
Program Implementation Costs																
Contingencies (per screening) (25%)				ę	26,067,298				\$ 18,502,231		1		\$ 53,947,169			\$ 127,141,510
Contingenties (per screening) (2970)				•	20,001,270				ψ 10,002,231				ψ 55,747,107			Ψ 127,141,310
Subtotal	+ +		1	\$	156,925,136		1		\$ 111,383,432	,	1	•	\$ 324,761,958		1	\$ 765,391,892
- www.ci.cl		1	I	4	.50,720,150		II .		+ 111,000,40Z	•			+ 027,101,730			- ,00,071,072

	COST ELEMENTS	UNIT	UNIT PRICE		Tunnel ((HST only)	
Subs	ection 4		Base: 2009 (3rd			С	
			Quarter)	Start: 1450 + 00	Start: 1533 + 00	1.57 N	Miles
	ection Details			0	01 1 0 00	Quant.	Cost
	le Track At-Grade (Mile) le Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles	
	le Track Tunnel (Mile)			Start: 1450 + 00	End: 1533 + 00	1.57 Miles	
	le Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
	Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
	Track Elevated (Mile)			Start: 0 + 00		0.00 Miles	
	Track Tunnel (Mile) Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
	ouble Track Section - Total			Start. 0 + 00		0.00 Miles	
	ouble Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$
2 D	ouble Track Section - On Structure	Mile	\$ 4,700,160			0.00	
	ouble Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			1.57	
ΙD	ouble Track Section - In Trench	Mile	\$ 4,700,160			0.00	5
F	our Track Section - Total						
	our-track Section - At Grade	Mile	\$ 4,200,448			0.00	
	our-Track Section - On Structure	Mile	\$ 9,400,320			0.00	
F	our-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0	
F	our-Track Section - In Trench	Mile	\$ 9,400,320			0 5	\$
_	ingle Treek Total						
	ingle Track - Total ingle Track Section - At Grade	Mile	\$ 1,549,312			0 5	
	ingle Track Section - At Grade ingle Track Section - On structure	Mile	\$ 1,549,312			0 5	
	ingle Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0 5	
	ingle Track Section - In Trench	Mile	\$ 2,350,080			0	
	reight Double Track - At Grade	Mile	\$ 2,839,552			0 5	
I FI	reight Single Track - At Grade	Mile	\$ 1,549,312			0 5	>
l _E	arthwork Items						
	ite Preparation - Undeveloped	Acre	\$ 9,216			0.00	5
	otal Cut	CY	\$ 6.00			0.00	
	otal Fill	CY	\$ 6.00			0.00	
	orrow	CY	\$ 13.00			0.00	
	poil	CY	\$ 13.00 \$ 6,144			0.00 \$	
	andscape erosion Control ecurity Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			0.00	
	pecial Drainage Facilities	5% Earl				0.00	
	•]				
	tructures, Tunnels, Walls						
	tandard Structure (assume cost for 2 track is 60% of unit cost)	Mile	\$ 34,972,672			0.00	
	igh Structure ong Span Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232				
	ong Span Structure /aterway Crossing - Primary	Mile	\$ 85,342,208				•
	/aterway Crossing - Finnary /aterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				
	win Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				
Tı	win Single Track TBM (<6 Miles)	Mile	\$ 106,637,312			0.00	
	win Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896			0.00	
	ouble Track Drill & Blast	Mile	\$ 146,887,680			0.00	
	ouble Track Mined (Soft Soil) ouble Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312			0.00 S 1.57 S	
	ouble Track TBM (<6 Miles) ouble Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			1.57	P 107,030,0.
	eismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$
С	rossovers	ea	\$ 442,368				
	ut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	
	rench Short	Mile	\$ 78,843,904			0.00	
	rench Long	Mile	\$ 57,524,224			1 57 (
	lechanical & Electrical for Tunnels etaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			1.57 S 0.00 S	
	etarring wans ontainment Walls	Mile	\$ 5,907,456			0.00	
	ingle Track Cut and Cover Subway	Mile	\$ 131,246,080			0.00	
F	our Track Drill & Blast	Mile	\$ 293,775,360			9	
	our Track Mined (Soft Soil)	Mile	\$ 158,400,000			0.00	
	our Track TBM (<6 Miles) our Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792			0.00	
	our Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	
ľ	The state of the s	TVIIIC	202,172,100			0.00	•
G	rade Separations						
	oadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				
	oadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				
	oadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0 3	
	oadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) oadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520			0 5	
	oadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				
	oadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Juban)	ea	\$ 2,850,816				
6 R	oadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$
7 S	treet Bridging HSR Trench	ea	\$ 1,398,784			0 5	
	linor Crossing Closures	ea	\$ 87,040	Ì		0 9	5

COST ELEMENTS	UNIT	UNI	T PRICE		Tunnel (I	HST only)		
Subsection 4		Base:	2009 (3rd		,			
		Qı	uarter)			C		
				Start: 1450 + 00	Start: 1533 + 00	1.57	Miles	
Subsection Details						Quant.	Cos	t
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles	003	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 1450 + 00	End: 1533 + 00	1.57 Miles		
Double Track Trench (Mile)				Start: 0 + 00	F1 0 00	0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)				Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		
Building Items								
1 Intermediate Passenger Stations	Each	\$	-				\$	-
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade	Each Each	\$	15,000,000				\$ \$	-
Caltrain Passenger Station - At-Grade Caltrain Passenger Station - On Structure	Each		15,000,000				\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each		15,000,000			1		000,000
Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-
3 Maintenance Facility	Each		23,921,884				\$	-
4 Parking - Structures	space	\$	-				\$	-
5 Parking - At Grade	space	\$	-				\$	-
Rail & Utility Relocation	1							
1 Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-
2 Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-
3 Single Track Removal	Mile	\$	130,048				\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ \$	1,084,416 775,168				\$ \$	-
7 Major Utility Relocations - Suburban	Mile	\$	464,896				\$	
8 Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-
ROW (Not Included)								
ROW required for each segment 1 Dense Urban	Acro	¢	2 704 221				¢	
2 Urban	Acre Acre	\$	2,786,321 1,371,510				\$ \$	
3 Dense Suburban	Acre	\$	908,134				\$	
4 Suburban	Acre	\$	208,418				\$	-
5 Undeveloped	Acre	\$	3,642				\$	-
ROW required for Temp. Construction Easement	١.						\$	-
1 Dense Urban 2 Urban	Acre Acre						\$	-
3 Dense Suburban	Acre						\$	_
4 Suburban	Acre						\$	_
5 Undeveloped	Acre						\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities								
6 Dense Urban	Acre	\$	2,786,321				\$	-
7 Urban 8 Dense Suburban	Acre Acre	\$	1,371,510 908,134				\$ \$	
9 Suburban	Acre	\$	208,418				\$	-
10 Undeveloped	Acre	\$	3,642				\$	-
Environmental Mitigation = 3% Line Costs	1							259,348
Sustam Flamenta	1							
System Elements 1 Signaling (ATC)	Mile	\$	2,070,000			1.57	\$ 27	253,977
2 Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.57		348,864
3 Wayside Protection System	Mile	\$	108,000			1.57		169,773
	1							
Electrification Items			1 170 000			4 = -		200 205
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$	1,170,000 1,485,000			1.57 1.57		339,205 334,375
2 Traction Power Distribution Subtota		Φ	1,400,000			1.5/		334,375 350,477
Program Implementation Costs (per screening)	1							954,372
Program Implementation Costs								,
Contingencies (per screening) (25%)	1						\$ 55,8	337,619
Subtotal							¢ 22/2	142 4/0
Subtotal (Payadad)							\$ 336,1	142,468

Subtotal (Rounded) \$ 336,000,000

ection 4		Base: 2009 (3rd	l			Ĩ						Ï		
action Datails		Quarter)		D			D)			D	
action Datails			Start: 1533 + 00	Start: 1565 + 00	0.61 Miles	Start: 1533 + 00 End: 1565 + 00	0.61 Miles		Start: 1533 + 00	0.61 M	liles	Start: 1533 + 00 Start: 1565 + 00	0.61 Mile	!S
ection betails		<u> </u>			Quant. Cost		Quant.	Cost		Quant.	Cost		Quant.	Cost
le Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles	Start: 1533 + 00 End: 1565 + 00			Start: 0 + 00 Start: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles	
le Track Elevated (Mile)			Start: 1533 + 00	End: 1565 + 00	0.61 Miles	Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
le Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 1533 + 00 End: 1565 + 00	0.61 Miles	
le Track Trench (Mile)			Start: 0 + 00	Fnd. 0 . 00	0.00 Miles	Start: 0 + 00 Fmd: 0 : 00	0.00 Miles		Start: 1533 + 00 End: 1565 + 00	0.61 Miles		Start: 0 + 00	0.00 Miles	
Track Construction/Reconstruction At-Grade (Mile) Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Track Tunnel (Mile)			Start: 0 + 00	LIIU. U + UU	0.00 Miles	Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Track Trench (Mile)			Start: 0 + 00	0.00 Miles	0.00 Miles	Start: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
ouble Track Section - Total														
Oouble Track Section - At Grade	Mile	\$ 2,100,224			0.00 \$		0.61 \$	1,272,863		0.00 \$	-		0.00 \$	
ouble Track Section - On Structure	Mile	\$ 4,700,160			0.61 \$ 2,848,583	2	0.00 \$	-		0.00 \$			0.00 \$	
Pouble Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00 \$	-	0.00 \$	-		0.00 \$			0.61 \$	2,848,5
ouble Track Section - In Trench	Mile	\$ 4,700,160			0.00 \$	-	0.00 \$	-		0.61 \$	2,848,582		0.00 \$	
our Track Section - Total														
our-track Section - At Grade	Mile	\$ 4,200,448			0.00 \$		0.00 \$			0.00 \$			0.00 \$	
our-track Section - At Grade our-Track Section - On Structure	Mile	\$ 9,400,320			0.00 \$		0.00 \$	-		0.00	-		0.00 \$	
our-Track Section - On Structure our-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00 \$		0.00 \$	-		0 \$	-		0.00 \$	
our-Track Section - In Tranner of Subway	Mile	\$ 9,400,320			0.00 \$		0.00 \$	_		0.00 \$			0.00 \$	
our rack section in renen	IVIIIC	Ψ 7,400,320			0.00		0.00			υ.υυ ψ	,			
ingle Track - Total														
ingle Track Section - At Grade	Mile	\$ 1,549,312			0.00 \$		0.00 \$	-		0 \$	-	1	0 \$	
ingle Track Section - On structure	Mile	\$ 2,350,080			0.00 \$		0.00 \$	-		0 \$	-		0 \$	
ingle Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0.00 \$	-	0.00 \$	-		0 \$	-		0 \$	
ingle Track Section - In Trench	Mile	\$ 2,350,080			0.00 \$		0.00 \$	-		0 \$	-		0 \$	
reight Double Track - At Grade	Mile	\$ 2,839,552			0.00 \$	-	0.00 \$	-		0 \$	-		0 \$	
reight Single Track - At Grade	Mile	\$ 1,549,312			0.00 \$		0.00 \$	-		υ \$	-		0 \$	
arthwork Items														
ite Preparation - Undeveloped	Acre	\$ 9,216			0.00 \$		0.00 \$			8.08 \$	74,473		8.08 \$	74,47
otal Cut	CY	\$ 6.00			0.00 \$		0.00 \$	-		260740.74 \$	1,564,444		260740.74 \$	1,564,44
otal Cut otal Fill	CY	\$ 6.00			0.00 \$		0.00 \$	-		0.00 \$		1	200740.74 \$	1,504,44
COLLON	CY	\$ 13.00			0.00 \$.	0.00 \$	-		0.00 \$	-	1	0.00 \$	
poil	CY	\$ 13.00			0.00 \$		0.00 \$	-		260740.74 \$	3,389,630	1	260740.74 \$	3,389,63
andscape erosion Control	Acre	\$ 6,144			0.00 \$		0.00 \$	-		8.08 \$	49,648		8.08 \$	49,64
ecurity Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00 \$		0.00 \$	-		0.61 \$	87,505		0.61 \$	87,50
pecial Drainage Facilities	5% Eart				\$		\$	-		\$	258,285		\$	258,28
structures, Tunnels, Walls												1	<u> </u>	
standard Structure	Mile	\$ 34,972,672			0.00 \$	•	0.00 \$	-		0.00 \$	-	1	0.00 \$	
ligh Structure	Mile	\$ 40,424,448			\$	•	\$	-		\$	-	1	\$	
ong Span Structure	Mile	\$ 61,919,232			\$	•	\$	-		\$	-	1	\$	
Vaterway Crossing - Primary	Mile Mile	\$ 85,342,208			6					\$	-	1	[\$	
Vaterway Crossing - Secondary (Irrigation Canal) win Single Track Drill&Blast (<6 Miles)		\$ 92,049,408			\$		\$	-		\$	-	1	\$	
win Single Track Drill&Blast (<6 Miles) win Single Track TBM (<6 Miles)		\$ 142,731,264 \$ 106,637,312			\$		\$	-		\$	-		\$	
win Single Track TBM (<6 Miles) win Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312			°		4	-		1 0	, -	1	\$ 6	
ouble Track Drill & Blast	Mile	\$ 176,720,696			0.00 \$		0.00 \$	-		0.00 \$	-	1	0.00 \$	
Pouble Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	.	\$ 0.00	-		0.00	-	1	\$	
Ouble Track TBM (<6 Miles)	Mile	\$ 106,637,312			*			_		,		1		
Pouble Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896										1		
eismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			\$		\$	-		\$	-	1	\$	
Crossovers	ea	\$ 442,368			\$		\$	-		Š	-	1	\$	
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00 \$		0.00 \$	-		0.00 \$	-	1	0.61 \$	79,543,07
rench Short	Mile	\$ 78,843,904			0.00 \$		0.00 \$	-		0.61 \$	47,784,184	1	0.00 \$	
rench Long	Mile	\$ 57,524,224			\$		\$	-		\$	-	1	\$	
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			\$	•	\$	-		\$	-	1	0.61 \$	7,181,03
Petaining Walls	Mile	\$ 8,613,888			0.00 \$	•	0.00 \$	-		0.61 \$			0.00 \$	
Containment Walls	Mile	\$ 5,907,456			0.00 \$	•	0.00 \$	-		0.61 \$	3,580,276		0.00 \$	
ingle Track Cut and Cover Subway		\$ 131,246,080			\$	•	\$	-		\$	-	1	\$	
our Track Drill & Blast	Mile	\$ 293,775,360			\$	•	\$	-		\$	-	1	\$	
our Track Mined (Soft Soil)	Mile	\$ 158,400,000			\$		\$	-		\$	-	1	\$	
our Track TBM (<6 Miles) our Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792										1		
our Track Cut & Cover Tunnel		\$ 353,441,792 \$ 262,492,160			0.00 \$		0.00 \$			0.00 \$:		0.00 \$	
Our Track Out & COVER TUILING!	wille	φ 202,472,100			υ.υυ φ		0.00 \$	-		0.00 \$	-		0.00 \$	
Grade Separations														
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			1 \$ 13,284,35	2	\$	-		\$	-	1	\$	
loadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			0 \$		0 \$	-		\$	-	1	\$	
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0 \$		0 \$	-		0 \$	-	1	0 \$	
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			\$		\$	-		\$	-	1	\$	
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			\$		\$	-		\$	-	1	\$	
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$		\$	-		\$	-	1	\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			\$		\$	-		\$	-	1	\$	
Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328			\$		\$	-		\$	-	1	\$	
treet Bridging HSR Trench	ea	\$ 1,398,784			\$		\$	-		0 \$	-	1	0 \$	
finor Crossing Closures	ea	\$ 87,040			\$		\$	-		\$	-		0 \$	

COST ELEMENTS	UNI			Aerial Viaduct	(HST only)			At-Grade (CA	LTRAIN only)			Open Trend	ch (HST only)			Covered Tr	ench (HST only)	
Subsection 4		Base: 2009 (3rd	d	D					<u> </u>				D				D	
		Quarter)	Start: 1533 + 00		0.61 Miles	<u> </u>	Start: 1533 + 00		0.61 Miles		Start: 1533 + 00	Start: 1565 + 00		1 Miles	Start: 1533 + 00	Start: 1565 + 00	, _	I Miles
Subsection Details			Ctt 0 00	Ct+ 0 00	Quant.	Cost	Ct 1522 00	F1 15/5 00	Quant.	Cost	C11 0 00	C++ 0 00	Quant.	Cost	C++ 0 00	Ctt 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 1533 + 00	Start: 0 + 00 End: 1565 + 00	0.00 Miles 0.61 Miles		Start: 1533 + 00 Start: 0 + 00	End: 1565 + 00	0.61 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00	E11d. 1303 1 00	0.00 Miles		Start: 0 + 00		0.00 Miles	1	Start: 0 + 00		0.00 Miles	1	Start: 1533 + 00	End: 1565 + 00	0.61 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00	21101 1000 1 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	- 10 00	0.00 Miles	4	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Building Items 1 Intermediate Passenger Stations	Eac	h ¢			¢					•				¢				•
2 Terminal Passenger Stations	Eac				\$	-				\$ -				\$	-			\$ -
Caltrain Passenger Station - At-Grade	Eac				\$	-				\$ -				\$	-			\$ -
Caltrain Passenger Station - On Structure	Eac				\$	-				\$ -				\$	-			\$ -
Caltrain Passenger Station - In Tunnel or Subway	Eac				\$	-				\$ -				\$	-			\$ -
Caltrain Passenger Station - In Trench	Eac				\$	-				\$ -				\$	=			\$ -
3 Maintenance Facility	Eac				\$	-				\$ -				\$	-			\$ -
4 Parking - Structures	spac				\$	-				-				\$	-			\$ -
5 Parking - At Grade	spac	ce \$ -			\$	-				\$ -				\$	-			\$ -
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			4	-				S -				s	_			\$ -
2 Single Track Relocation (Permanent)	Mile				\$					\$ -				\$	-			\$ -
3 Single Track Removal	Mile				\$	-				\$ -				\$	-			\$ -
4 Major Utility Relocations - Dense Urban	Mile				\$	-				\$ -				\$	-			\$ -
5 Major Utility Relocations - Urban	Mile				\$	-				\$ -				\$	=			\$ -
6 Major Utility Relocations - Dense Suburban	Mile				\$	-				\$ -				\$	-			\$ -
7 Major Utility Relocations - Suburban	Mile				\$	-				-				\$	-			\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$	-				\$ -				\$	-			\$ -
ROW (Not Included)																		
ROW (Not included) ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321			\$					\$ -				\$	-			\$ -
2 Urban	Acre				\$	-				\$ -				\$	-			\$ -
3 Dense Suburban	Acre				\$	-				\$ -				\$	-			\$ -
4 Suburban	Acre				\$	-				\$ -				\$	-			\$ -
5 Undeveloped	Acre	\$ 3,642			\$	-				-				\$	-			-
ROW required for Temp. Construction Easement					\$	-				-				\$	-			-
1 Dense Urban 2 Urban	Acre Acre				B					B ¢				\$	-			\$ -
3 Dense Suburban	Acre				\$	-				•				•	-			\$ -
4 Suburban	Acre				\$					\$ -				\$	_			\$ -
5 Undeveloped	Acre				\$	-				\$ -				\$	-			\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																		
6 Dense Urban	Acre				\$	-				\$ -				\$	-			\$ -
7 Urban	Acre				\$					-				\$	-			-
8 Dense Suburban 9 Suburban	Acre	\$ 908,134 \$ 208,418			\$					-				\$	-			\$ -
10 Undeveloped	Acre				\$	-				-				\$	-			\$ -
Environmental Mitigation = 3% Line Costs	Acie	3,042			\$	483,988				\$ 38,186				\$ 1,945,72	7			\$ 2,849,900
						.30,700				33,700				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				. 2,5 . 7, 50
System Elements														1				
1 Signaling (ATC)	Mile				0.61 \$	1,254,545			0.61				0.61				0.61	
2 Communications (w/ Fiber Optic Backbone)	Mile				0.61 \$	327,273			0.61				0.61	1 \$ 327,27	3		0.61	\$ 327,273
3 Wayside Protection System	Mile	\$ 108,000			0.61 \$	65,455			0.61	\$ 65,455			0.61	1 \$ 65,45	5		0.61	\$ 65,455
Electrification Items																		
1 Traction Power supply	Mile	\$ 1,170,000			0.61 \$	709,091			0.61	\$ 709,091			0.61	1 \$ 709,09	1		0.61	\$ 709,091
2 Traction Power Distribution	Mile				0.61 \$	900,000			0.61				0.61				0.61	
	Subtotal	.,,			\$	19,873,285			3.01	\$ 4,567,413			3.01	\$ 70,059,65			3.51	\$ 101,102,943
Program Implementation Costs (per screening)					\$	5,067,688				\$ 1,164,690				\$ 17,865,21				\$ 25,781,250
Program Implementation Costs																		
Contingencies (per sercening) (25%)						4.040.221				¢ 11410F0				¢ 17 E1 / O1	4			¢ 25.275.707
Contingencies (per screening) (25%)					\$	4,968,321				\$ 1,141,853				\$ 17,514,91	4			\$ 25,275,736
Subtotal	-	•		1	\$	29,909,295				\$ 6,873,956		•		\$ 105,439,78	4	•	•	\$ 152,159,929
•					L .		•							1				

	COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)		
ub	section 4		Base: 2009 (3rd Quarter)			D		
			Quarter)	Start: 1533 + 00	Start: 1565 + 00		Mile	S
_	11 B. 13							0 1
	section Details ble Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles		Cost
	ble Track Elevated (Mile)			Start: 0 + 00	Start. 0 + 00	0.00 Miles		
	ble Track Tunnel (Mile)			Start: 1533 + 00	End: 1565 + 00	0.61 Miles		
	ble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
	Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
	· Track Elevated (Mile) · Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		
	Track Trench (Mile)			Start: 0 + 00	Endro : co	0.00 Miles		
	Double Track Section - Total							
	Double Track Section - At Grade	Mile	\$ 2,100,224			0.00		
	Double Track Section - On Structure Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.61		2,848,58
	Double Track Section - In Trainler of Subway Double Track Section - In Trench	Mile	\$ 4,700,160			0.00		2,040,30
Ï	South Hadi Godion in Honor		4 17.007.00			0.00	*	
F	Four Track Section - Total							
	Four-track Section - At Grade	Mile	\$ 4,200,448			0.00		
	Four-Track Section - On Structure	Mile	\$ 9,400,320			0	\$	
	Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00	\$	
1	FOUI-TRACK SECTION - IN TRENCH	iville	\$ 9,400,320			U	Þ	
9	Single Track - Total							
5 5	Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$	
	Single Track Section - On structure	Mile	\$ 2,350,080			0	\$	
	Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	
8 5	Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
0 1	Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
	Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
	3 3						·	
E	Earthwork Items							
	Site Preparation - Undeveloped	Acre	\$ 9,216			0.00		
	Total Cut	CY	\$ 6.00			0.00		
	Total Fill Borrow	CY CY	\$ 6.00 \$ 13.00			0.00 0.00	\$	
	Spoil	CY	\$ 13.00			0.00		
	Landscape erosion Control	Acre	\$ 6,144			0.00	\$	
	Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	\$	
8	Special Drainage Facilities	5% Eart	hwork				\$	
	Charles Towards Wells							
	Structures, Tunnels, Walls Standard Structure	Mile	\$ 34,972,672			0.00	\$	
	High Structure	Mile	\$ 40,424,448			0.00	\$	
	Long Span Structure	Mile	\$ 61,919,232				\$	
	Waterway Crossing - Primary	Mile	\$ 85,342,208				\$	
	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$	
	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	
	Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312 \$ 176,720,896				\$	
	Twin Single Track TBM w/3rd Tube (<6 Miles) Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$	
	Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	\$	
	Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			0.61	\$	64,628,67
[Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896					
	Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$	
	Crossovers Cut & Cover Double Track Tunnel	ea	\$ 442,368			0.00	\$	
- 1	Cut & Cover Double Track Tunnel Trench Short	Mile Mile	\$ 131,246,080 \$ 78,843,904			0.00 0.00		
	Trench Snort Trench Long	Mile	\$ 78,843,904 \$ 57,524,224			0.00	\$	
	Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			0.61	\$	7,181,03
17 F	Retaining Walls	Mile	\$ 8,613,888			0.00		, = .,00
18 (Containment Walls	Mile	\$ 5,907,456			0.00	\$	
	Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	
	Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000			0.00	\$ \$	
	Four Track TBM (<6 Miles)	Mile	\$ 138,400,000			0.00		
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792			0.50	\$	
	Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	
	0 1 0 1							
	Grade Separations		¢ 10.004.050					
	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528				\$	
	Roadway Crossing HSR - 4 Lane Roadway Order 4 Tracks (Orban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 19,926,528 \$ 2,759,680			0	\$	
	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,739,000				\$	
	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$	
5 F	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$	
	Street Bridging HSR Trench	ea	\$ 1,398,784			0		
×II	Minor Crossing Closures	ea	\$ 87,040		l	0	\$	

COST ELEMENTS	UNIT	UNIT PRICE]	Tunnel ((HST only)	
Subsection 4		Base: 2009 (3rd Quarter)	-		D	
		Quarter)	Start: 1533 + 00	Start: 1565 + 00		Miles
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	Start. 0 1 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 1533 + 00	End: 1565 + 00	0.61 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	E110. 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
Building Items 1 Intermediate Passenger Stations	Each	\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000				\$ - \$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -
4 Parking - Structures	space	\$ -				\$ -
5 Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation						
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				-
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile	\$ 1,084,416				\$ - \$ -
7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)						
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -
4 Suburban	Acre	\$ 208,418				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement						\$ -
1 Dense Urban 2 Urban	Acre Acre					\$ - \$ -
3 Dense Suburban	Acre					\$ -
4 Suburban	Acre					\$ -
5 Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities		A 0.70/ 001				•
6 Dense Urban 7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ - \$ -
8 Dense Suburban	Acre	\$ 1,371,510 \$ 908,134				\$ -
9 Suburban	Acre	\$ 208,418				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs						\$ 2,239,749
System Elements						
1 Signaling (ATC)	Mile	\$ 2,070,000			0.61	\$ 1,254,545
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.61	\$ 327,273
3 Wayside Protection System	Mile	\$ 108,000			0.61	\$ 65,455
Electrification Items						
1 Traction Power supply	Mile	\$ 1,170,000			0.61	\$ 709,091
2 Traction Power Distribution	Mile	\$ 1,485,000			0.61	
Subtot		/,]	\$ 80,154,401
Program Implementation Costs (per screening)						\$ 20,439,372
Program Implementation Costs						
Contingencies (per screening) (25%)						\$ 20,038,600
Contangencies (per sercenting) (2370)						Ψ 20,030,000
Subtotal						\$ 120,632,373
Subtotal (Pounded)						\$ 121,000,000

Subtotal (Rounded) \$ 121,000,000

	5A (0.8	3 miles)			5B (1.7 miles)				5C (1.0 miles)	
Subsection 5	At Grade	Deep Tunnel (HST Only)	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	At-Grade	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$11 (4 tracks) \$9 (2 tracks)	\$151 (2 tracks)	· ·		\$355 (4 tracks) \$343 (2 tracks)	\$833 (4 tracks) \$474 (2 tracks)	\$524 (2 tracks)		\$588 (4 tracks) \$610 (2 tracks)	\$671 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Lowest	Medium	Highest	Medium	Lowest	Lowest	Highest	Lowest	Lowest
Notes:	4 tracks - 1. Four tracks on existing Caltrain alignment. 2. Existing 4-track alignment. 2 tracks (2 HST)- 1. Two tracks on existing Caltrain alignment. 2. Must be combined with 2 track deep tunnel option.		2 tracks - 1. Caltrain Atherton and Menlo Park stations. 2. Must be combined with 2 track deep	Watkins Ave, Encinal Ave, Glenwood Ave, Oak Grove Ave, and Ravenswood Ave. 2 tracks - 1. Grade separations	 Caltrain Atherton and Menlo Park stations; tracks - Caltrain Atherton and Menlo Park stations; Must be combined 	4 tracks - 1. Caltrain Atherton and Menlo Park stations; 2 tracks - 1. Caltrain Atherton and Menlo Park stations; 2. Must be combined with 2 track deep tunnel option.	2 tracks - 1. Must be combined with 2 track aerial viaduct, at grade, trench, or tunnel option.	4 tracks - No notes. 2 tracks - 1. Must be combined with 2 track deep tunnel option.	No notes. 2 tracks - 1 Must be combined.	2 tracks - 1. Must be combined with 2 track at grade, trench, or tunnel option.

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade (2 tracks)			At-Grade (4 tracks)				Tunnel ((HST only)	
Subsection 5		Base: 2009 (3rd	Ctart: 1E/E : 00	A	0.7/ M	llee	Ctort 1E/E . 00	A	77 Mile		Ctort. 1E/E . 00	Ctort. 1/0F . 00	A 0.7/ Mile	
		Quarter)	Start: 1565 + 00	End: 1605 + 00	0.76 M	lles	Start: 1565 + 00	End: 1605 + 00).76 Mile	es	Start: 1565 + 00	Start: 1605 + 00	0.76 Mile	:S
Subsection Details		•	Ct 15/5 00	F	Quant.	Cost	Ctt 0 00	Quant.		Cost	Ctt 0 00	Ctt 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 1565 + 00 Start: 0 + 00	End: 1605 + 00	0.76 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00			Start: 0 + 00 Start: 0 + 00	Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles			Start: 1565 + 00	End: 1605 + 00	0.76 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles			Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles			End: 1605 + 00 0.76 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	0.00 Miles 0.00 Miles			Start: 0 + 00	F1 0 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total			Start. 0 7 00		0.00 Miles		Start. 0 1 00	0.00 Willes			Start: 0 1 00		0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.76				0.00 \$	-			0.00 \$	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00				0.00 \$	-			0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160			0.00 \$ 0.00 \$				0.00 \$	-			0.76 Miles \$ 0.00 \$	3,560,72
4 Double Track Section - In Trench	IVIIIe	\$ 4,700,160			0.00 3	-		'	0.00 \$	-			0.00 \$	
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00 \$	-			0.76 \$	3,182,158			0.00 \$	
Four-Track Section - On Structure	Mile	\$ 9,400,320			0 \$				0 \$	-			0 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0 \$				0 \$	-			0.00 Miles \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	-		1	0.00 \$	-			0 \$	
Single Track - Total														
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0 8	· -			0 \$	-			0 \$	
6 Single Track Section - On structure	Mile	\$ 2,350,080			0 \$				0 \$	-			0 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0 \$				0 \$	-			0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0 \$	-			0 \$	-			0 \$	
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0 5				0 ¢				0 \$	
10 Freight Single Track - At Grade	Mile	\$ 2,839,552			0 3				0 \$	-			0 \$	
		, 1,517,012												
Earthwork Items														
1 Site Preparation - Undeveloped	Acre	\$ 9,216			6.31				6.31 \$	58,153			0.00 \$	
2 Total Cut	CY	\$ 6.00			0.00				0.00 \$	-			0.00 \$	
3 Total Fill 4 Borrow	CY	\$ 6.00 \$ 13.00			0.00 \$				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	
5 Spoil	CY	\$ 13.00			0.00				0.00 \$	-			0.00 \$	
6 Landscape erosion Control	Acre	\$ 6,144			6.31				6.31 \$	38,769			0.00 \$	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.76				0.76 \$	109,382			0.00 \$	
8 Special Drainage Facilities	5% Eart	hwork			\$	10,315			\$	10,315			\$	-
Structures, Tunnels, Walls 1 Standard Structure	Mile	\$ 34,972,672			0.00 \$				0.00 \$				0.00 \$	
2 High Structure	Mile	\$ 40,424,448			0.00 1	-		'	0.00 \$	-			0.00 \$	
3 Long Span Structure	Mile	\$ 61,919,232			Š	-			\$	-			\$	
4 Waterway Crossing - Primary	Mile	\$ 85,342,208			0 \$	-			0 \$	-			\$	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408											\$	
6 Twin Single Track Drill&Blast (<6 Miles)		\$ 142,731,264			\$	-			\$	-			\$	
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896			\$	-			\$	-			\$	
9 Double Track Drill & Blast	Mile	\$ 176,720,896			0.00	· -			0.00 \$	-			0.00 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00			'	\$	-			0.00 \$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$	-			\$	-			0.76 \$	80,785,842
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			\$	-			\$	-				
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				-			\$	-			\$	
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			0.00	· -			\$	-			0.00	
14 Trench Short	Mile	\$ 131,246,080 \$ 78,843,904			0.00 \$				0.00 \$	-			0.00 \$ 0.00 \$	
15 Trench Long	Mile	\$ 57,524,224			5.55	-]	\$	-			\$	
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			\$	•			\$	-			0.76 \$	8,976,29
17 Retaining Walls	Mile	\$ 8,613,888			0.00 \$				0.00 \$	-			0.00 \$	
18 Containment Walls	Mile	\$ 5,907,456			0.00	-			0.00 \$	-			0.00 \$	
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360			3	-			\$	-			\$	
Four Track Mined (Soft Soil)	Mile	\$ 293,775,360 \$ 158,400,000							\$	-			0.00 \$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624			3	-			\$	-			0.00 \$	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792			\$	-			\$	-			\$	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	-			0.00 \$	-			0.00 \$	
Crado Sonarations														
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			a d				¢				· ·	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)		\$ 13,284,352				, - } -			\$	-				
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0 \$	-			0 \$	-			0 \$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			\$	-			\$	-			\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			0 \$				0 \$	-			\$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$				\$	-			\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			0 \$				0 \$	-			\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784			\$	-			\$	-			0 \$	
8 Minor Crossing Closures	ea	\$ 1,398,784				, -			\$	-			0 \$	
		57,010							*					
Building Items														
	I	1		I	ı l		l	I I	I		I I		ı l	

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade (2	2 tracks)			At-Grade (4 tracks)			Tunnel	(HST only)		
Subsection 5		Base: 2009 (3rd		Α				Α				T -	A		
		Quarter)	Start: 1565 + 00	End: 1605 + 00	0.76 Mile	es	Start: 1565 + 00	End: 1605 + 00	0.76	Miles	Start: 1565 + 00	Start: 1605 + 00	0.76	Miles	
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.		Cost
Double Track At-Grade (Mile)			Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		
Double Track Trench (Mile)			Start: 0 + 00	F1 0 00	0.00 Miles		Start: 0 + 00	F=-1 1/0F 00	0.00 Miles		Start: 0 + 00	F1 0 00	0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1565 + 00 Start: 0 + 00	End: 1605 + 00	0.76 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	1	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	1	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End. 0 1 00	0.00 Miles		
1 Intermediate Passenger Stations	Each	\$ -			\$	-				\$ -				\$	-
2 Terminal Passenger Stations	Each	\$ -			\$	-				\$ -				\$	-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$	-				\$ -				\$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000			\$	-				\$ -			_	\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$	-				\$ -			0	\$	-
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884			\$	-				\$ -				\$	-
4 Parking - Structures	space	\$ 123,921,004			9	-				\$				\$	-
5 Parking - At Grade		*			Š	-				\$ -				\$	-
or and or and or	ориос	•			Ť					•				*	
Rail & Utility Relocation															
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$	-				\$ -				\$	-
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896			\$	-				\$ -				\$	-
3 Single Track Removal	Mile	\$ 130,048			\$	-				\$ -				\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$	-				\$ -				\$	-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$	-				-				\$	-
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896			\$	-				5 -				\$	-
8 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile	\$ 404,690			\$	-				\$ -				\$	-
o iviajor offinity relocations - orideveloped	WIIIC	\$ 30,720			\$					-				Ψ	
ROW (Not Included)															
ROW required for each segment															
1 Dense Urban	Acre	\$ 2,786,321			\$	-				\$ -				\$	-
2 Urban	Acre	\$ 1,371,510			\$	-				\$ -				\$	-
3 Dense Suburban	Acre	\$ 908,134			\$	-				\$ -				\$	-
4 Suburban	Acre	\$ 208,418			\$	-				-				\$	-
5 Undeveloped	Acre	\$ 3,642			\$	-				-				\$	-
ROW required for Temp. Construction Easement	۸				\$	-				\$ -				\$	-
1 Dense Urban 2 Urban	Acre Acre				\$	-				\$ -				\$	-
3 Dense Suburban	Acre				\$	Ī				\$				\$	-
4 Suburban	Acre				Š	_				\$ -				\$	
5 Undeveloped	Acre				\$	-				\$ -				\$	
Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6 Dense Urban	Acre	\$ 2,786,321			\$	-				\$ -				\$	-
7 Urban	Acre	\$ 1,371,510			\$	-				\$ -				\$	-
8 Dense Suburban	Acre	\$ 908,134			\$	-				\$ -				\$	-
9 Suburban 10 Undeveloped	Acre	\$ 208,418 \$ 3,642			\$	-				\$ -				\$	-
	Acre	\$ 3,642			3	- 54 221				\$ 101.062				\$	2 700 606
Environmental Mitigation = 3% Line Costs					•	54,231				\$ 101,963				Ψ	2,799,686
System Elements															
1 Signaling (ATC)	Mile	\$ 2,070,000			0.76 \$				0.76	\$ 1,568,182			0.76	\$	1,568,182
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.76 \$				0.76				0.76		409,091
3 Wayside Protection System	Mile	\$ 108,000			0.76 \$	81,818			0.76	\$ 81,818			0.76	\$	81,818
Florida None															
Electrification Items	N 451 -	¢ 1170.000			07/ 4	007.374			0.77	¢ 00/0/4			0.77		00/ 3/4
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			0.76 \$ 0.76 \$				0.76 0.76				0.76 0.76		886,364 1,125,000
2 Haction Power Distribution Subtota	I IVIIIE	ψ 1,400,000	 		0.70 \$	5,932,383			0.70	\$ 7,571,194		+	0.70		1,123,000
Program Implementation Costs (per screening)	"				\$	1,512,758				\$ 1,930,654					25,549,215
Program Implementation Costs					ľ	, . 30				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					.,,0
Contingencies (per screening) (25%)					\$	1,483,096				\$ 1,892,798				\$	25,048,250
			I]						ļ. —	
Subtotal Subtotal (Pounded)					\$	8,928,236				\$ 11,394,647					150,790,466

Subtotal (Rounded) \$ 9,000,000 \$ 11,000,000 \$ 151,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Aerial (2 t	racks)		 	Aerial (4	ıracks)		At-Grade (2	tracks)		At-Grade (4 tracks)	
Subsection 5		Base: 2009 (3rd		В				В			В			n		
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	1	.70 Miles	Start: 1605 + 00 End: 1695 + 00	1.70 Miles		Start: 1605 + 00 End: 1695 + 00	1.70 Miles	
			Start. 1005 ± 00	Jun 1. 1070 ± 00	1.701	mica	Start. 1000 ± 00	Start. 1073 ± 00	1.	. r o ivinios	Start. 1000 ± 00 LHG. 1070 ± 00	1.70 WHES		Start. 1005 ± 00 Ellu. 1075 ± 00	1.70 WINES	
ubsection Details		•			Quant.	Cost			Quant.	Cost		Quant.	Cost		Quant.	Cost
Oouble Track At-Grade (Mile)	<u></u>		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1605 + 00 End: 1695 + 00			Start: 0 + 00 End: 0 + 00	0.00 Miles	
Oouble Track Elevated (Mile)			Start: 0 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	1	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Oouble Track Tunnel (Mile) Oouble Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	+	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Tour Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 1695 + 00	1.70 Miles	
our Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00			Start: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
our Track Trench (Mile)			Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles	•	Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Section - Total				<u> </u>	25-1											
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00 \$ 1.70 \$	0.011./0/			0.00			1.70 \$			0.00 \$	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$	8,011,636			0.00			0.00 \$			0.00 \$ 0.00 \$	
4 Double Track Section - In Tunnel of Subway		\$ 4,700,160			0.00 \$	-			0.00			0.00 \$			0.00 \$	
The second of th	10	1,730,100			0.50				0.00	*		5.00 p	_		σ.σσ.φ	•
Four Track Section - Total																
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00 \$	-			0.00			0.00 \$			1.70 \$	
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00 \$	-			1.70			0.00 \$			0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00 \$	-			0.00			0.00 \$			0.00 \$	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00 \$	-			0.00	> -		0.00 \$	-		0.00 \$	>
Single Track - Total	1															
5 Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0.00 \$	_			0.00	\$ -		0.00 \$			0.00 \$	\$
6 Single Track Section - On structure	Mile	\$ 2,350,080			0.00 \$	-			0.00			0.00 \$			0.00 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0.00 \$	-			0.00			0.00 \$			0.00 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0.00 \$	-			0.00			0.00 \$			0.00 \$	
	1															
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0.00 \$	-			0.00			0.00 \$			0.00 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0.00 \$	-			0.00	> -		0.00 \$	-		0.00 \$	>
Earthwork Items	1															
1 Site Preparation - Undeveloped	Acre	\$ 9,216			26.52 \$	244,408			26.52	\$ 244,408		26.52 \$	244,408		26.52 \$	\$ 244,40
2 Total Cut	CY	\$ 6.00			0.00 \$	- 200			0.00			0.00 \$			0.00 \$	
3 Total Fill	CY	\$ 6.00			0.00 \$	-			0.00			0.00 \$			0.00 \$	\$
4 Borrow	CY	\$ 13.00			0.00 \$	-			0.00			0.00 \$			0.00 \$	\$
5 Spoil	CY	\$ 13.00			0.00 \$	-			0.00			0.00 \$			0.00 \$	\$
6 Landscape erosion Control	Acre	\$ 6,144			26.52 \$	162,939			26.52			26.52 \$			26.52 \$	\$ 162,93
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00 \$	- 20,367			0.00	\$ 20,367		1.70 \$			1.70 \$	\$ 246,10 \$ 32,67
8 Special Drainage Facilities	5% Earthwork				\$	20,367						3	32,673		\$	⊅ 3∠,67
Structures, Tunnels, Walls					1											
1 Standard Structure	Mile	\$ 34,972,672			1.70 \$	59,612,509			1.70	\$ 59,612,509		0.00 \$			0.00 \$	\$
2 High Structure	Mile	\$ 40,424,448			\$	-				\$ -		\$	-		\$	\$
3 Long Span Structure	Mile	\$ 61,919,232			\$	-				\$ -		\$	-		\$	\$
4 Waterway Crossing - Primary	Mile	\$ 85,342,208]											
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			\$	-				\$ -		\$	-		\$	\$
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			\$	-				\$ -		\$	-		\$	\$ ¢
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896			\$	-				\$ - \$ -		\$	· -		\$	Ф \$
9 Double Track Drill & Blast	Mile	\$ 176,720,696			0.00 \$	-			0.00	*		0.00 \$			0.00 \$	\$
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			\$	-			0.00	\$ -		\$			\$	\$
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312														
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896]											
1 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			\$	-				\$ -		\$	-		\$	\$
2 Crossovers	ea	\$ 442,368			\$	-				\$ -		\$	-		\$	\$
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00 \$	-			0.00			0.00 \$			0.00 \$	
4 Trench Short 5 Trench Long	Mile Mile	\$ 78,843,904 \$ 57,524,224			0.00 \$	-			0.00	\$ -		0.00 \$			0.00 \$	\$
16 Mechanical & Electrical for Tunnels	Mile	\$ 57,524,224 \$ 11,848,704			\$	-				\$		\$			\$	\$ \$
17 Retaining Walls	Mile	\$ 8,613,888			0.00 \$	-			0.00	\$ -		0.00 \$			0.00 \$	\$
18 Containment Walls	Mile	\$ 5,907,456			0.00 \$	-			0.00			0.00 \$			0.00 \$	\$
9 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			\$	-				\$ -		\$			\$	\$
Four Track Drill & Blast	Mile	\$ 293,775,360			\$	-				\$ -		\$			\$	\$
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			\$	-				\$ -		\$	-		\$	\$
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624														
Four Track Cit & Cover Turnel	Mile Mile	\$ 353,441,792			0.00				0.00	¢		0.00			0.00 *	¢
Four Track Cut & Cover Tunnel	iviile	\$ 262,492,160			0.00 \$	-			0.00	-		0.00 \$	-		0.00 \$	Ф
Grade Separations	1															
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			\$	-				\$ -		\$	-		\$	\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			0 \$	-			0	\$ -		0 \$	-		0 \$	\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0 \$	-			0	\$ -		0 \$	-		6 \$	* \$ 16,558,0
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			\$	-				\$ -		6 \$			\$	\$
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			\$	-				\$ -		\$	-		\$	\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$	-				\$ -		\$	-		\$	\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			\$	-				\$ -		\$	-		\$	\$
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328			\$	-				\$ -		\$			\$	\$
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040			\$	-				\$ - \$ -		\$			\$	\$ ¢
		i.b 87 ()4()	i		1 5	-	i	1		D -	i l	\$, -	1 1	1.8	n.

COST ELEMENTS	UNIT	UNIT PRICE		Aerial (2 t	tracks)			Aerial (4 to	racks)			At-Grade (2	tracks)			At-Grade ((4 tracks)	
Subsection 5		Base: 2009 (3rd		Ъ				В				р					1	
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	1.70 N	Miles	Start: 1605 + 00	Start: 1695 + 00	1	70 Miles	Start: 1605 ± 00	End: 1695 + 00	1 70 Miles		Start: 1605 ± 00	End: 1695 + 00	1 70 Miles	
			Start. 1003 + 00	Start. 1075 + 00	1.70 10	illes	Start: 1005 + 00	Start: 1075 + 00	1	70 Wiles	Start: 1005 + 00	Liiu. 1073 + 00	1.70 Willes		Start. 1003 + 00	E11d. 1075 + 00	1.70 Willes	
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00	Start: 0 + 00 End: 1695 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1605 + 00 Start: 0 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Elevated (Mile)			Start: 1605 + 00 Start: 0 + 00	E110: 1095 + 00	1.70 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00	+	0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	1	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	-	0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Building Items			Start. 0 + 00	0.00 Miles	0.00 Willes		Start. 0 + 00	0.00 Willes	0.00 Miles		Start. 0 + 00		0.00 Willes		3tart. 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -			\$	-				\$ -				\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -			\$	-				\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$	-				\$ -				\$ -			2	\$ 30,000,000
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Each Each	\$15,000,000 \$15,000,000			2 \$	30,000,000			2	\$ 30,000,000				\$ -				\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000			\$	_				\$ -				\$ -				\$ -
3 Maintenance Facility	Each	\$ 123,921,884			\$	-				\$ -				\$ -				\$ -
4 Parking - Structures	space	\$ -			\$	-				\$ -				\$ -				\$ -
5 Parking - At Grade	space	\$ -			\$	-				\$ -				\$ -				\$ -
Rail & Utility Relocation												1						
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$	-				\$ -		1		\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896			\$	-				\$ -		1		\$ -				\$ -
3 Single Track Removal	Mile	\$ 130,048			\$	-				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$	-				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$	=				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896			\$	-				\$ -				\$ -				\$ -
8 Major Utility Relocations - Suburban	Mile	\$ 404,690			\$	-				\$ -				\$ -				\$ -
Unitagor Guilly Relocations Graceveloped	IVIIIC	ψ 30,720			J					Ψ				Ψ				Ψ
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321			\$	-				\$ -				\$ -				\$ -
2 Urban 3 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134			\$	-				\$ - ¢				\$ -				\$ -
4 Suburban	Acre	\$ 208,418			\$	-				\$ -				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642			\$	-				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement					\$	-				\$ -								
1 Dense Urban	Acre				В					В								
2 Urban 3 Dense Suburban	Acre Acre				\$	-				\$ -				-				\$ -
4 Suburban	Acre				\$	-				\$ -				\$ -				\$ -
5 Undeveloped	Acre				\$	_				\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																		
6 Dense Urban	Acre	\$ 2,786,321			\$	-				\$ -				\$ -				\$ -
7 Urban	Acre	\$ 1,371,510			\$	-				\$ -				\$ -				\$ -
8 Dense Suburban 9 Suburban	Acre Acre	\$ 908,134 \$ 208,418			\$	-				\$ -				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642			\$					\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs		0,012			\$	2,941,556				\$ 3,181,905				\$ 493,304				\$ 1,632,122
System Elements	Mile	¢ 2.070.000			1 70 6	2 520 400			1 70	\$ 3,528,409		1	1 70	¢ 2 E20 400			1 70	¢ 2 E20 400
Signaling (ATC) Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			1.70 \$ 1.70 \$	3,528,409 920,455			1.70 1.70			1	1.70 1.70				1.70 1.70	
3 Wayside Protection System	Mile	\$ 108,000			1.70 \$	184,091			1.70				1.70				1.70	\$ 184,091
Electrification Items		4 4 7 7 7 7 7 7				1.001.01-								A 4001007				4 400.00
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			1.70 \$ 1.70 \$	1,994,318 2,531,250			1.70 1.70				1.70 1.70				1.70 1.70	
	btotal	φ 1,480,000			1./0 \$	2,531,250			1.70	\$ 2,531,250 \$ 118,403,924			1.70	\$ 26,095,291			1.70	\$ 2,531,250 \$ 65,194,708
Program Implementation Costs (per screening)					\$	28,088,744				\$ 30,193,001				\$ 6,654,299				\$ 16,624,651
Program Implementation Costs																		
Contingencies (per screening) (25%)					\$	27,537,985				\$ 29,600,981				\$ 6,523,823				\$ 16,298,677
Contingencies (per screening) (23%)						Z1,331,703				ψ <u>∠</u> 7,000,781				ψ 0,323,023				ψ 10,270,0//
Subtotal					\$	165,778,668			'	\$ 178,197,906			•	\$ 39,273,413		1	•	\$ 98,118,036
Cultitated (Decumeled)						// 000 000	U	U		¢ 170 000 000				¢ 20 000 000	L			¢ 00 000 000

COST ELEMENTS	UNIT	UNIT PRICE	Open Trend	ch (2 tracks)			Open Trend	ch (4 tracks)		Covered Trend	ch (2 tracks)			Covered Trend	h (4 tracks)	
Subsection 5		Base: 2009 (3rd Quarter)	-	R				3		R				R		
		Quarter)	Start: 1605 + 00 Start: 1695 + 00	1.70 N	liles	Start: 1605 + 00	Start: 1695 + 00	1.70 Miles	S	Start: 1605 + 00 Start: 1695 + 00	1.70 N	liles	Start: 1605 + 00	Start: 1695 + 00	1.	70 Miles
Subsection Details				Quant.	Cost			Quant.	Cost		Quant.	Cost			Ouant	Cost
Double Track At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles	0031	Start: 0 + 00	Start: 0 + 00	0.00 Miles	0031	Start: 0 + 00 Start: 0 + 00	0.00 Miles	0031	Start: 0 + 00	Start: 0 + 00	0.00 Miles	0031
Double Track Elevated (Mile) Double Track Tunnel (Mile)		-	Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1605 + 00 End: 1695 + 00	0.00 Miles 1.70 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)		-	Start: 1605 + 00 End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	_	Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)		-	Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	ŀ	Start: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	_	Start: 0 + 00 Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
Four Track Trench (Mile)			Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	0.00 Miles	_	Start: 0 + 00	End. 1070 : 00	0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224		0.00	•			0.00 \$			0.00				0.00 \$	
2 Double Track Section - On Structure	Mile	\$ 4,700,160		0.00	-			0.00 \$	-		0.00				0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160		0.00	-			0.00 \$	-		1.70	8,011,636			0.00	
4 Double Track Section - In Trench	Mile	\$ 4,700,160		1.70	8,011,636			0.00 \$	-		0.00	-			0.00 \$	-
Four Track Section - Total																
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320		0.00	-			0.00 \$	-		0.00 \$	-			0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		0	-			0 \$	-		0.00	-			1.70	16,023,273
Four-Track Section - In Trench	Mile	\$ 9,400,320		0.00	-			1.70 \$	16,023,273		0 \$	-			0 \$	-
5 Single Track Section - At Grade	Mile	\$ 1,549,312		0 \$	-			0 \$	-		0 \$	-			0 \$	-
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080		0 3	-			0 \$	-		0 \$	-			0 \$	-
8 Single Track Section - In Trumer of Subway	Mile	\$ 2,350,080		0	,			0 \$	-		0 \$	5 -			0 \$	-
0 Freight Double Track At Crade	Mile	\$ 2,839,552						0 6							٨	
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile	\$ 2,839,552 \$ 1,549,312		0 9	-			0 \$ 0 \$	-		0 \$				0 \$	-
Earthwork Items 1 Site Preparation - Undeveloped	Acre	\$ 9,216		22.73	209,455			22.73 \$	209,455		22.73	209,455			22.73	209,455
2 Total Cut	CY	\$ 6.00		733333.33	4,400,000			733333.33 \$	4,400,000		733333.33	4,400,000			733333.33	
3 Total Fill 4 Borrow	CY	\$ 6.00 \$ 13.00		0.00 S	-			0.00 \$ 0.00 \$	-		0.00	-			0.00	-
5 Spoil	CY	\$ 13.00		733333.33	9,533,333			733333.33 \$	9,533,333		733333.33 \$	9,533,333			733333.33 \$	9,533,333
6 Landscape erosion Control	Acre Mile	\$ 6,144 \$ 144,384		22.73 S 1.70 S	139,636 246,109			22.73 \$ 1.70 \$	139,636 246,109		22.73 \$ 0.00 \$	139,636			22.73 \$ 0.00 \$	139,636
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	5% Earthwork	φ 144,384		1.70	5 246,109 5 726,427			1.70 \$	726,427		0.00	714,121			0.00	714,121
Structures, Tunnels, Walls																
1 Standard Structure	Mile	\$ 34,972,672		0.00	-			0.00 \$	-		0.00	-			0.00 \$	-
2 High Structure	Mile Mile	\$ 40,424,448 \$ 61,919,232			-			\$	-		\$	-			\$	-
3 Long Span Structure 4 Waterway Crossing - Primary	Mile	\$ 61,919,232 \$ 85,342,208			-			\$	-		3				3	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			-			\$	-		\$	-			\$	-
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312			-			\$ ¢	-		\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896						\$	-		3	-			\$	-
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile Mile	\$ 146,887,680 \$ 79,200,000		0.00	-			0.00 \$	-		0.00	-			0.00 \$	-
Double Track Milled (Soft Soft) Double Track TBM (<6 Miles)	Mile	\$ 106,637,312		[, -			•	-		3	, -] 3	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896		l .								,				
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368			-			\$	-		3				3	-
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080		0.00	-			0.00 \$	-		1.70				0.00	
14 Trench Short 15 Trench Long	Mile Mile	\$ 78,843,904 \$ 57,524,224		1.70	134,393,018			1.70 \$	134,393,018		0.00	-			0.00 \$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704		0.00	-			0.00 \$	-		1.70	20,196,655			1.70	20,196,655
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456		1.70 S 1.70 S				1.70 \$ 1.70 \$	14,682,764 10,069,527		0.00 \$				0.00 \$ 0.00 \$	-
19 Single Track Cut and Cover Subway	Mile	\$ 5,907,456 \$ 131,246,080		1.70	5 10,009,527			1.70 \$	10,007,527		0.00				0.00	-
Four Track Drill & Blast	Mile	\$ 293,775,360			-			\$	-		9	-			0.00	-
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624			-			\$	-		\$	-			\$	-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792														
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160		0.00	-			0.00 \$	-		0.00	-			1.70 \$	447,429,818
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			-			\$	-		\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680		0 9	-			0 \$	-		3				3	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			-			\$	-		\$	-			\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,563,520 \$ 3,593,216			-			\$	-		\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,593,216 \$ 2,850,816			, - } -			\$	-		3				3	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328			-			\$	-			-				-
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040		0 3	-			0 \$	-		0 \$	-			0 \$	-
Similar orosaning orosan os	ou .	ψ 07,040		[*	-		0 1	· -			0 1	- [
•	•	. '	•			•		ı	ı		·	1				ı

COST ELEMENTS	UNIT	UNIT PRICE		Open Trer	nch (2 tracks)			Open Tren	ch (4 tracks)			Covered Trend	:h (2 tracks)			Covered Tren	ch (4 tracks)	
Subsection 5		Base: 2009 (3rd			D				D			D				D		
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	1.70	Miles	Start: 1605 + 00	Start: 1695 + 00	1.70) Miles
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	Start: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	Start: 0 + 00	Quant.	Cost
Double Track Al-Grade (Mile)			Start: 0 + 00	Start. 0 + 00	0.00 Miles		Start: 0 + 00	Start. 0 + 00	0.00 Miles		Start: 0 + 00	Start. 0 + 00	0.00 Miles		Start: 0 + 00	Start. 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles		Start: 0 + 00	F 1 0 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	-	Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
Four Track Trench (Mile)	•		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Building Items 1 Intermediate Passenger Stations	Each	¢				c				¢				¢				
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -			\$	-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -				\$ -			\$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -				\$ -			\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -			0	\$ -			\$	-
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884			2	\$ 30,000,000			2	\$ 30,000,000			2	\$ 30,000,000			2 \$	30,000,000
4 Parking - Structures	space	\$ 123,721,004				\$ -				\$ -				\$ -			\$	-
5 Parking - At Grade	space	\$ -				\$ -				\$ -				\$ -			\$	-
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				¢				¢				¢				
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -			\$	-
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$ -			\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -			\$	-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				-			\$	-
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile	\$ 775,168 \$ 464,896				\$ -				\$ -				\$ -			\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -			\$	-
ROW (Not Included)																		
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$				\$.			\$	
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -			\$	-
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -			\$	-
4 Suburban	Acre	\$ 208,418				\$ -				-				-			\$	-
5 Undeveloped ROW required for Temp. Construction Easement	Acre	\$ 3,642				-				\$ -				- •			\$	-
1 Dense Urban	Acre					\$ -				\$ -				\$ -			\$	-
2 Urban	Acre					\$ -				\$ -				\$ -			\$	-
3 Dense Suburban	Acre					\$ -				\$ -				\$ -			\$	-
4 Suburban 5 Undeveloped	Acre					\$ -				-				-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					-				-				-			3	•
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -			\$	-
7 Urban	Acre	\$ 1,371,510				\$ -				\$ -				-			\$	-
8 Dense Suburban 9 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ -				\$ -				\$ -			\$	-
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -			\$	
Environmental Mitigation = 3% Line Costs						\$ 6,372,357				\$ 6,612,706				\$ 8,907,592			\$	15,859,389
System Elements	N 451 -	¢ 0.070.000			4.70	¢ 0.500.400			4 70	¢ 0.500.400			4 70	¢ 2.500.400			170 6	2 520 400
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			1.70 1.70				1.70 1.70				1.70 1.70				1.70 \$ 1.70 \$	3,528,409 920,455
3 Wayside Protection System	Mile	\$ 108,000			1.70				1.70				1.70				1.70 \$	184,091
Electrification Items	N ASI	A 470 000			4.70	A 4004010			4.70	A 4004010			4 70	A 4004010			4 70 6	1 004 040
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			1.70 1.70				1.70 1.70				1.70 1.70				1.70 \$ 1.70 \$	1,994,318 2,531,250
Program Implementation Costs (per screening)		., 1,100,000			1.70	\$ 227,942,785 \$ 58,125,410			1.70	\$ 236,194,771 \$ 60,229,667			1.70	\$ 314,985,861 \$ 80,321,394			\$	553,664,202 141,184,372
Program Implementation Costs (per screening)						ψ 50,120,410				Ψ 00,227,007				ψ 00,021,374				171,104,572
Contingencies (per screening) (25%)						\$ 56,985,696				\$ 59,048,693				\$ 78,746,465			\$	138,416,051
Subtotal		-				\$ 343,053,892				\$ 355,473,130				\$ 474,053,720			\$	833,264,625

COST ELEMENTS	UNIT	UNIT PRICE		runnel (HST only)	
Subsection 5		Base: 2009 (3rd Quarter)			В	
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	1.70 N	liles
Subsection Details					Quant.	Cost
Oouble Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Oouble Track Elevated (Mile) Oouble Track Tunnel (Mile)			Start: 0 + 00 Start: 1605 + 00	End: 0 + 00 End: 1695 + 00	0.00 Miles 1.70 Miles	
Oouble Track Terrich (Mile)			Start: 0 + 00	LIIU. 1075 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	Liid. 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00	2.10.0.00	0.00 Miles	
Double Track Section - Total						
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			1.70 Miles	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	5
Four Track Section - Total						
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	:
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00 Miles 3	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0 9	;
Single Track - Total		A T 10 01 -				
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile	\$ 1,549,312			0 9	
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080 \$ 2,350,080			Ů,	
8 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080			0 5	
Single Hack Section - III Hellell	IVIIIC	φ 2,330,060			U S	,
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0 5	;
Earthwork Items						
1 Site Preparation - Undeveloped	Acre	\$ 9,216			0.00	
2 Total Cut	CY	\$ 6.00			0.00	
3 Total Fill 4 Borrow	CY CY	\$ 6.00 \$ 13.00			0.00 S 0.00 S	
4 Borrow 5 Spoil	CY	\$ 13.00 \$ 13.00			0.00	
6 Landscape erosion Control	Acre	\$ 6,144			0.00	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	
8 Special Drainage Facilities	5% Earthwork	Ψ 144,304			0.00	
Structures, Tunnels, Walls						
1 Standard Structure	Mile	\$ 34,972,672			0.00	
2 High Structure	Mile	\$ 40,424,448				
3 Long Span Structure	Mile	\$ 61,919,232				
4 Waterway Crossing - Primary	Mile	\$ 85,342,208				
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264				
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				,
8 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			0.00	,
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			1.70	
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				
12 Crossovers	ea	\$ 442,368			5	
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	
14 Trench Short	Mile	\$ 78,843,904			0.00	;
15 Trench Long	Mile	\$ 57,524,224			5	
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			1.70	
17 Retaining Walls	Mile	\$ 8,613,888			0.00	
18 Containment Walls	Mile	\$ 5,907,456			0.00	
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000			0.00	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624			0.00	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792			0.00	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	
	1					
Grade Separations	1					
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0 5	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216 \$ 2,850,816				
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 2,850,816 \$ 3,171,328				
7 Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784			0	
8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040			0 3	
Optimior Orosality Orosalica	Cu	₩ 07,040	I	1	U .	•

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)	
Subsection 5		Base: 2009 (3rd				
		Quarter)	Start: 1605 + 00	Start: 1695 + 00	B 1.70	Miles
			Start: 1005 + 00	Start: 1095 + 00	1.70	willes
Subsection Details		1			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 1605 + 00	End: 0 + 00 End: 1695 + 00	0.00 Miles 1.70 Miles	
Double Track Trench (Mile)			Start: 0 + 00	E110. 1090 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) Building Items	1		Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0	*
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			0	*
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884				\$ \$
4 Parking - Structures	space	\$ 123,721,004				\$ -
5 Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation	l					
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile Mile	\$ 2,000,896 \$ 130,048				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included) ROW required for each segment						
1 Dense Urban	Acre	\$ 2,786,321				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -
4 Suburban	Acre	\$ 208,418 \$ 3.642				\$ -
5 Undeveloped ROW required for Temp. Construction Easement	Acre	\$ 3,642				\$
1 Dense Urban	Acre					\$
2 Urban	Acre					\$ -
3 Dense Suburban	Acre					\$ -
4 Suburban	Acre					\$ -
5 Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acre	\$ 2,786,321				\$
7 Urban	Acre	\$ 1,371,510				\$
8 Dense Suburban	Acre	\$ 908,134				\$ -
9 Suburban	Acre	\$ 208,418				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs						\$ 9,883,113
System Elements						
1 Signaling (ATC)	Mile	\$ 2,070,000			1.70	\$ 3,528,409
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.70	\$ 920,455
3 Wayside Protection System	Mile	\$ 108,000			1.70	\$ 184,091
Electrification Items						
1 Traction Power supply	Mile	\$ 1,170,000			1.70	\$ 1,994,318
2 Traction Power Distribution	Mile	\$ 1,485,000			1.70	
Subtotal		7.22,230				\$ 348,478,726
Program Implementation Costs (per screening)						\$ 88,862,075
Program Implementation Costs						
Contingencies (per screening) (25%)						\$ 87,119,682
Subtotal	<u> </u>	1		1	1	\$ 524,460,483
Subtotal (Daymdad)						\$ 524,460,483

Subtotal (Rounded) \$ 524,000,000



COST ELEMENTS Subsection 5		UNIT PRICE		At-Grade (2 tracks)	At-Grade (4 tracks)				Covered Trench (2 tracks)				Covered Trench (4 tracks)				
		Base: 2009 (3rd Quarter)	C C			С				С				С			
		Qual (el)	Start: 1695 + 00	End: 1765 + 00 1.33	Miles	Start: 1695 + 00		1.33 Mi	les	Start: 1695 + 00	Start: 1765 + 00	1.33 Mil	es	Start: 1695 + 00	Start: 1765 + 00	1.33 M	Miles
Subsection Details				Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Oouble Track At-Grade (Mile)			Start: 1695 + 00 Start: 0 + 00	End: 1765 + 00 1.33 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	<u> </u>	Start: 0 + 00	Start: 0 + 00	0.00 Miles	_	Start: 0 + 00	Start: 0 + 00	0.00 Miles 0.00 Miles	
Oouble Track Elevated (Mile) Oouble Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles	-	Start: 0 + 00 Start: 1695 + 00	End: 1765 + 00	0.00 Miles 1.33 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles	
Oouble Track Teinner (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	LIIU. 1705 + 00	0.00 Miles	-	Start: 0 + 00	 	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00 0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
our Track Elevated (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00	2.10.1700 / 00	0.00 Miles		Start: 0 + 00	2.10.0.00	0.00 Miles		Start: 0 + 00	2.10.01.00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles	
our Track Trench (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total															1		
1 Double Track Section - At Grade	Mile	\$ 2,100,224		1.33				0.00 \$				0.00 \$	-		1	0.00 \$	
2 Double Track Section - On Structure	Mile Mile	\$ 4,700,160 \$ 4,700,160		0.00				0.00 \$ 0.00 \$				0.00 \$ 1.33 \$	6,231,273		1	0.00 \$ 0.00 \$	
3 Double Track Section - In Tunnel or Subway 4 Double Track Section - In Trench	Mile	\$ 4,700,160		0.00				0.00 \$				0.00 \$	0,231,273		1	0.00 \$	
4 Double Hack Section - III Herich	IVIIIC	\$ 4,700,100		0.00	-			0.00 \$	-			0.00 \$	-		1	0.00 \$	•
Four Track Section - Total															1		
Four-track Section - At Grade	Mile	\$ 4,200,448		0.00	\$ -			1.33 \$	5,568,776			0.00 \$	-		1	0.00 \$	
Four-Track Section - On Structure	Mile	\$ 9,400,320		0.00				0.00 \$	-			0 \$	-		1	0 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		0.00	\$ -			0.00 \$	-			0.00 \$	-		1	1.33 \$	12,462,54
Four-Track Section - In Trench	Mile	\$ 9,400,320		0.00	\$ -			0.00 \$	-			0 \$	-		1	0 \$	
															1		
Single Track - Total															1		
5 Single Track Section - At Grade	Mile	\$ 1,549,312		0.00				0.00 \$				0 \$	-		1	0 \$	
6 Single Track Section - On structure	Mile	\$ 2,350,080		0.00				0.00 \$				0 \$	-		1	0 \$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080		0.00				0.00 \$				0 \$	-		1	0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080		0.00	\$ -			0.00 \$	-			0 \$	=		1	0 \$	
															1	٠	
9 Freight Double Track - At Grade	Mile	\$ 2,839,552		0.00				0.00 \$				0 \$	-		1	0 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312		0.00	-			0.00 \$	-			0 \$	=		1	0 \$	
Earthwork Items															1		
1 Site Preparation - Undeveloped	Acro	\$ 9,216		13.89	\$ 128,010			13.89 \$	128,010			17.68 \$	162,909		1	17.68 \$	162,90
2 Total Cut	Acre CY	\$ 9,210		0.00				0.00 \$				570370.37 \$	3,422,222		1	570370.37 \$	3,422,22
3 Total Fill	CY	\$ 6.00		0.00	\$ -			0.00 \$	-			\$70370.37	3,422,222		1	\$70370.37) J,422,22.
4 Borrow	CY	\$ 13.00		0.00				0.00 \$				0.00 \$			1	0.00 \$	
5 Spoil	CY	\$ 13.00		0.00				0.00 \$				570370.37 \$	7,414,815		1	570370.37 \$	7,414,81
6 Landscape erosion Control	Acre	\$ 6,144		13.89				13.89 \$				17.68 \$	108,606		1	17.68 \$	108,60
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384		1.33				1.33 \$				0.00 \$	-		1	0.00 \$;
8 Special Drainage Facilities	5% Earth				\$ 20,238			\$	20,238			\$	555,428		1	\$	555,42
															1		
Structures, Tunnels, Walls															1		
1 Standard Structure	Mile	\$ 34,972,672		0.00	\$ -			0.00 \$	-			0.00 \$	-		1	0.00 \$;
2 High Structure	Mile	\$ 40,424,448			\$ -			\$	-			\$	-		1	\$	
3 Long Span Structure	Mile	\$ 61,919,232			\$ -			\$	-			\$	-		1	\$	
4 Waterway Crossing - Primary	Mile	\$ 85,342,208										\$	-		1	\$	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			\$ -			\$	-			\$	-		1	\$	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			\$ -			\$	-			\$	-		1	\$	
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896			\$ -			3	-			\$	-		1	\$	
9 Double Track Drill & Blast	Mile	\$ 176,720,690		0.00	\$ -			0.00 \$	-			1.33 \$	194,737,455		1	0.00 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000		0.00	\$ -			0.00	-			1.33 \$	174,737,433		1	0.00 \$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			_				-			"	-		1	1 4	
Double Track TBM (<0 times) Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896													1		
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			\$ -			\$	-			\$	-		1	\$	
12 Crossovers	ea	\$ 442,368			\$ -			Š	-			\$	-		1	\$	
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080		0.00				0.00 \$	-			1.33 \$	174,000,485		1	0.00 \$;
14 Trench Short	Mile	\$ 78,843,904		0.00				0.00 \$	-			0.00 \$	-		1	0.00 \$;
15 Trench Long	Mile	\$ 57,524,224			\$ -			\$	-			\$	-		1	\$	
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			\$ -			\$	-			\$	-		1	\$	
17 Retaining Walls	Mile	\$ 8,613,888		0.00				0.00 \$				0.00 \$	-		1	0.00 \$;
18 Containment Walls	Mile	\$ 5,907,456		0.00	-			0.00 \$	-			0.00 \$	-		1	0.00 \$	
19 Single Track Cut and Cover Subway	Mile Mile	\$ 131,246,080			-			\$	-			\$	-		1	\$	
Four Track Drill & Blast	Mile	\$ 293,775,360			\$ -			\$	-			\$	=		1	0.00 \$	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			\$ -			\$	-			\$	-		1	\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624													1		
Four Track Cut & Cover Tuppel	Mile	\$ 353,441,792		2.22	¢			0.00				0.00			1	1 22 6	240.000.07
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160		0.00	a -			0.00 \$	-			0.00 \$	=		1	1.33 \$	348,000,97
Grade Separations															1		
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	0.3	\$ 13,284,352			¢										1	e-	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528			\$			U 6	- [3	-		1	\$	
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			\$			0 4	-			\$	=		1	•	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568		l I	\$ -			٩	-			,	-		1	\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520		[\$ -			\$	-			\$	-		1	\ \frac{\sigma}{\sigma}	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$ -			\$	_			\$	_		1	\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			\$ -			\$	_			\$	_		1	\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328			\$ -			\$	_			\$	_		1	\$	
	ea	\$ 1,398,784			\$ -			Š	-			0 \$	-		1	0 \$	
/ Street Bridging HSR Trench												-1*			4 1	-1 *	
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea	\$ 87,040			\$ -			\$	-			0 \$	-		!	0 \$	

COST ELEMENTS	UNIT UNIT PRICE		At-Grade (2	2 tracks)		At-Grade (4 tracks)			Covered Trench (2 tracks)			Covered Trench (4 tracks)		
Subsection 5	Base: 2009 (3rd	d						0						
	Quarter)	Ctort. 1/05 00	C	4.00	Mileo	Ctort. 1/05 00	C	1 22 149	Ctort. 1/05 . 00 Ct 47/5 .00	U 100	Mileo	Ctort. 1/05 . 00 Ct1 47/5 . 00	C	2 Miles
		Start: 1695 + 00	End: 1/65 + 00	1.33	Miles	Start: 1695 + 00	End: 1765 + 00	1.33 Miles	Start: 1695 + 00 Start: 1765 + 00	1.33	Miles	Start: 1695 + 00 Start: 1765 + 00	1.33	3 Miles
Subsection Details	L .			Quant.	Cost			Quant. Cost		Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	Start: 0 + 00 Start: 0 + 00	0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	Start: 1695 + 00 End: 1765 + 00	1.33 Miles		Start: 0 + 00	0.00 Miles	
Double Track Trench (Mile)		Start: 0 + 00	F 1 0 00	0.00 Miles		Start: 0 + 00	E 1 47/E 00	0.00 Miles	Start: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1695 + 00 Start: 0 + 00	End: 1765 + 00	1.33 Miles 0.00 Miles	Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 1695 + 00 End: 1765 + 00	1.33 Miles	
Four Track Trench (Mile)		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles	1	Start: 0 + 00	0.00 Miles	
Building Items														
1 Intermediate Passenger Stations	Each \$ -				\$ -			\$	-		\$ -			\$ -
2 Terminal Passenger Stations	Each \$ -				\$ -			\$	-		\$ -			\$ -
Caltrain Passenger Station - At-Grade	Each \$15,000,000				\$ -			\$	-		-			\$ -
Caltrain Passenger Station - On Structure	Each \$15,000,000				\$ -			\$	-		-			\$ -
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each \$15,000,000 Each \$15,000,000				\$ -			\$	-		-			\$ -
3 Maintenance Facility	Each \$ 123,921,884				\$ -			\$	=					\$ -
4 Parking - Structures	space \$ -				\$ -			\$	_		\$			\$ -
5 Parking - At Grade	space \$ -				\$ -			\$	-		\$ -			\$ -
J								*						-
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mile \$ 2,000,896				-			\$	-		-			-
2 Single Track Relocation (Permanent)	Mile \$ 2,000,896				\$ -			\$	-		-			-
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile \$ 130,048 Mile \$ 1,548,288				\$ -			\$	-		-			-
5 Major Utility Relocations - Dense Orban	Mile \$ 1,548,288				\$ -			\$			- 4			•
6 Major Utility Relocations - Dense Suburban	Mile \$ 775,168				\$ -			\$			\$ -			\$ -
7 Major Utility Relocations - Suburban	Mile \$ 464,896				\$ -			\$	-		\$ -			\$ -
8 Major Utility Relocations - Undeveloped	Mile \$ 30,720				\$ -			\$	-		\$ -			\$ -
ROW (Not Included) ROW required for each segment														
1 Dense Urban	Acre \$ 2,786,321				\$ -			\$	-		\$ -			\$ -
2 Urban	Acre \$ 1,371,510				\$ -			\$	-		\$ -			\$ -
3 Dense Suburban	Acre \$ 908,134				\$ -			\$	-		\$ -			\$ -
4 Suburban	Acre \$ 208,418				\$ -			\$	-		\$ -			\$ -
5 Undeveloped	Acre \$ 3,642				\$ -			\$	-		\$ -			\$ -
ROW required for Temp. Construction Easement					-			\$	-		-			\$ -
1 Dense Urban 2 Urban	Acre Acre				¢ B			B			-			-
3 Dense Suburban	Acre				\$ -			\$			-			•
4 Suburban	Acre				\$ -			\$			\$ -			\$ -
5 Undeveloped	Acre				\$ -			\$	-		\$ -			\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6 Dense Urban	Acre \$ 2,786,321				\$ -			\$	-		\$ -			\$ -
7 Urban	Acre \$ 1,371,510				\$ -			\$	-		-			\$ -
8 Dense Suburban	Acre \$ 908,134				\$ -			\$	-		-			\$ -
9 Suburban 10 Undeveloped	Acre \$ 208,418 Acre \$ 3,642				•			\$			- 4			- 0
Environmental Mitigation = 3% Line Costs	Acre \$ 3,642				\$ 96,282			\$ 179,8	13		\$ 11,598,996			\$ 11,163,825
					, ,,,,,,,,,			ψ 177,0			. 1,575,770			11,100,020
System Elements														
1 Signaling (ATC)	Mile \$ 2,070,000			1.33				1.33 \$ 2,744,3		1.33			1.33	
2 Communications (w/ Fiber Optic Backbone)	Mile \$ 540,000			1.33				1.33 \$ 715,9	09	1.33	\$ 715,909		1.33	\$ 715,909
3 Wayside Protection System	Mile \$ 108,000			1.33	\$ 143,182			1.33 \$ 143,1	32	1.33	\$ 143,182		1.33	\$ 143,182
Electrification Items														
1 Traction Power supply	Mile \$ 1,170,000			1.33	\$ 1,551,136			1.33 \$ 1,551,1	36	1.33	\$ 1,551,136		1.33	\$ 1,551,136
2 Traction Power Distribution	Mile \$ 1,485,000			1.33				1.33 \$ 1,968,7		1.33			1.33	
	Subtotal			.100	\$ 10,428,972			\$ 13,296,8	92	1.00	\$ 405,355,483			\$ 390,414,615
Program Implementation Costs (per screening)					\$ 2,659,388			\$ 3,390,7			\$ 103,365,648			\$ 99,555,727
Program Implementation Costs														
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					A 0.070:-						4 404 000 5=:			A 67.00:=:
Contingencies (per screening) (25%)					\$ 2,607,243			\$ 3,324,2	23		\$ 101,338,871			\$ 97,603,654
Cubtotal		<u> </u>			¢ 15 (05 (00		<u> </u>	é 00.044.0	22	1	¢ /10.0/0.000			¢
Subtotal					\$ 15,695,603			\$ 20,011,8	²²		\$ 610,060,002			\$ 587,573,996

	COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)		
Sub	section 5		Base: 2009 (3rd Quarter)			С		
			Quarter)	Start: 1695 + 00	Start: 1765 + 00	1.33	Mile	!S
	section Details			CI I O 00	CI I O OO	Quant.		Cost
	ole Track At-Grade (Mile) ole Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00	Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		
	ble Track Tunnel (Mile)			Start: 1695 + 00	End: 1765 + 00	1.33 Miles		
	ble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
	Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	Track Elevated (Mile) Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		
	Track Trench (Mile)			Start: 0 + 00	Liid. 0 + 00	0.00 Miles		
]	Double Track Section - Total							
	Double Track Section - At Grade	Mile	\$ 2,100,224			0.00		
	Double Track Section - On Structure Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 1.33 Miles		6,231,27
	Double Track Section - In Trainier of Subway	Mile	\$ 4,700,160			0.00		0,231,2
	Four Track Section - Total							
	Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320			0.00	\$	
	Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00 Miles		_
	Four-Track Section - In Trench	Mile	\$ 9,400,320			0		
	Single Track - Total	B 4:1	¢ 1.F40.040			_	*	
	Single Track Section - At Grade Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080			0	-	
	Single Track Section - On Structure Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0		
	Single Track Section - In Trench	Mile	\$ 2,350,080			0		
	Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$	
ıUl	Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
E	Earthwork Items							
1 5	Site Preparation - Undeveloped	Acre	\$ 9,216			0.00		
	Total Cut	CY	\$ 6.00			0.00		
	Total Fill Borrow	CY	\$ 6.00 \$ 13.00			0.00 0.00		
	Soriow Spoil	CY	\$ 13.00			0.00		
6 l	_andscape erosion Control	Acre	\$ 6,144			0.00		
	Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00		
8	Special Drainage Facilities	5% Eart	hwork I				\$	
,	Structures, Tunnels, Walls							
	Standard Structure	Mile	\$ 34,972,672			0.00	\$	
	High Structure	Mile	\$ 40,424,448				\$	
	Long Span Structure	Mile	\$ 61,919,232				\$	
	Naterway Crossing - Primary Naterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408				\$	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$	
7	Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$	
	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
	Double Track Drill & Blast	Mile	\$ 146,887,680			0.00		
	Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312			0.00 0.00		
	Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 106,637,312			1.33		234,289,0
	Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			55	\$	5.,207,0
	Crossovers	ea	\$ 442,368				\$	
	Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			1.33		174,000,4
	Trench Short Trench Long	Mile Mile	\$ 78,843,904 \$ 57,524,224			0.00	\$	
	Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704				\$	
17 F	Retaining Walls	Mile	\$ 8,613,888			1.33	\$	11,419,9
	Containment Walls	Mile	\$ 5,907,456			0.00		
	Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	
	Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000			0.00		
	Four Track TBM (<6 Miles)	Mile	\$ 213,274,624			0.00		
F	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792				\$	
F	Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	
	Grade Separations							
	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	
2 F	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0	\$	
	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	
	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,563,520 \$ 3,593,216				\$	
	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216				\$	
	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$	
	Street Bridging HSR Trench	ea	\$ 1,398,784			0		
	Minor Crossing Closures	ea	\$ 87,040			- 1	\$	

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (HST only)	
Subsection 5		Base: 2009 (3rd				
		Quarter)	CL 1 4/0F 00		C	
			Start: 1695 + 00	Start: 1765 + 00	1.33	Miles
Subsection Details					Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 1695 + 00 Start: 0 + 00	End: 1765 + 00	1.33 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) Building Items			Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -				\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884				\$ - \$ -
4 Parking - Structures	space	\$ 123,921,004				\$ -
5 Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation	NA:1-	¢ 0.000.001				¢
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896				\$ - \$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)						
ROW required for each segment						
1 Dense Urban	Acre	\$ 2,786,321				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -
3 Dense Suburban 4 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ - \$ -
5 Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement						\$ -
1 Dense Urban	Acre					\$ -
2 Urban	Acre					\$ -
3 Dense Suburban 4 Suburban	Acre Acre					\$ - \$ -
5 Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities	7 101 0					*
6 Dense Urban	Acre	\$ 2,786,321				\$ -
7 Urban	Acre	\$ 1,371,510				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -
9 Suburban 10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$ - \$ -
Environmental Mitigation = 3% Line Costs	71010	→ J,U4Z				\$ 12,778,223
System Elements		A 0.070.00				A 071100
1 Signaling (ATC)	Mile	\$ 2,070,000 \$ 540,000			1.33	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile	\$ 540,000			1.33 1.33	
		, 100,000			1.55	, 110,102
Electrification Items						
1 Traction Power supply	Mile	\$ 1,170,000			1.33	
2 Traction Power Distribution Subtotal	Mile	\$ 1,485,000			1.33	\$ 1,968,750 \$ 445,842,270
Program Implementation Costs (per screening)						\$ 445,842,270 \$ 113,689,779
Program Implementation Costs Program Implementation Costs						ψ 110,007,117
Contingencies (per screening) (25%)						\$ 111,460,567
Cubtatal	ļ					¢ /70.000.441
Subtotal (Douglast)						\$ 670,992,616

Subtotal (Rounded) \$ 671,000,000



		6A (1.2 miles)				6B (0.7 miles)		
Subsection 6	At Grade	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$75 (4 tracks) \$48 (2 tracks)	\$599	\$242 (2 tracks)	\$52 (4 tracks) \$47 (2 tracks)	\$41 (4 tracks) \$39 (2 tracks)	\$123	\$321	\$137 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest
Notes:	4 tracks - 1. Grade separation at Palo Alto Avenue. 2. Caltrain Palo Alto station. 3. Potential HST Palo Alto station (costs not included). 2 tracks - 1. Grade separation at Palo Alto Avenue. 2. Potential HST Palo Alto station (costs not included). 3. Must be combined with 2 track deep tunnel option.	1. Raise University Ave, Homer (Pedestrian) Ave, and Embarcadero Road. 2. Caltrain Palo Alto station. 3. Potential HST Palo Alto station (costs not included).	2 tracks - 1. Caltrain two tracks to remain at grade. 2. No potential HST Palo Alto station. 3. Must be combined with 2 track at grade option.	2 tracks - 1. <i>Must be combined</i>	4 tracks - No notes 2 tracks - 1. Grade separation at Churchill Avenue. 2. Must be combined with 2 track deep tunnel option.			2 tracks - 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. Must be combined with 2 track aerial viaduct or at grade option.

			6C (1.4 miles)					6D (0.6 miles)		
Subsection 6	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)
III/IIIIIANS I AAAS NAT		\$46 (4 tracks) \$18 (2 tracks)	\$278	\$694	\$284 (2 tracks)		\$112 (4 tracks) \$72 (2 tracks)	\$112	\$272	\$114 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Highest	Medium	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest
Notes:	4 tracks - No notes 2 tracks - 1. Caltrain California Avenue station. 2. Must be combined with 2 track deep tunnel option.	4 tracks - No notes 2 tracks - 1. Caltrain California Avenue station. 2. Must be combined with 2 track deep tunnel option.	Avenue station. 2. Raise Oregon	 Caltrain California Avenue station. Raise Oregon Expressway. 	2 tracks - 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. Must be combined with 2 track aerial viaduct or at grade option.	4 tracks - No notes 2 tracks - 1. Must be combined with 2 track deep tunnel option.	4 tracks - 1. Grade separation at East Meadow Drive and Charleston Road. 2 tracks - 1. Grade separation at East Meadow Drive and Charleston Road. 2. Must be combined with 2 track deep tunnel option.			2 tracks - 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. Must be combined with 2 track aerial viaduct or at grade option.

COST ELEMENTS	UNIT	UNIT PRICE		At-Grade	e (2 tracks)		At-Grade ((4 tracks)			Covered	d Trench			Tunnel ((HST only)	
Subsection 6		Base: 2009	Start: 1765 + 00	Fnd: 1920 - 00	A 1.21 Mile:		Start: 1765 + 00 End: 1829 + 00	1.21 Mile	95	Start: 1765 + 00	End: 1829 + 00	A 1.21 Mile		Start: 1765 + 00	End: 1829 + 00	A 1.21 I	Miles
		(3rd Quarter)	Start: 1/05 + 00	EIIU. 1829 + 00			Start. 1700 + 00 EHU: 1829 + 00			Start. 1700 + 00	E110. 1829 + UU	1.21 MIIE	:3 	Start: 1/05 + 00	ciiu. 1829 + 00	1.211	wiiies
Subsection Details Double Track At-Grade (Mile)			Start: 1765 + 00	End: 1020 : 00	Quant. 1.21 Miles	Cost	Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00	LIIU. 1027 + UU	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	LIIU. U T UU	0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1765 + 00 End: 1829 + 00	0.00 Miles 1.21 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 1765 + 00 Start: 0 + 00	End: 1829 + 00 End: 0 + 00	1.21 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total			Start. 0 + 00		0.00 Miles		Start. 0 + 00	0.00 Miles		Start. 0 + 00	Liid. 0 + 00	0.00 Miles		Start. 0 + 00	Liid. 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			1.21 \$	2,545,726		0.00 \$	-			0 \$	-			0.00	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 \$ 0.00 \$	-		0.00 \$ 0.00 \$	-			0 \$	-			0.00 1.21	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00 \$	-		0.00 \$	-			0 \$	-			0.00	
Four Track Section - Total																	
Four-track Section - At Grade	Mile	\$ 4,200,448			0.000000 \$	-		1.21 \$	5,091,452			0.00 \$	-			0.00	\$
Four-Track Section - On Structure	Mile	\$ 9,400,320			0 \$	-		0 \$	-			0.00 \$	-			0.00	
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320			0 \$ 0 \$	-		0 \$ 0 \$	-			1.21 \$ 0.00 \$	11,394,327			0.00	
		\$ 7,100,020										0.00				0.00	Y
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0 4			٥				0 6				0	¢
6 Single Track Section - On structure	Mile	\$ 1,549,312			0 \$	-		0 \$	-			0 \$	-			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0 \$	-		0 \$	-			0 \$	-			0	\$ -
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0 \$	-		0 \$	-			0 \$	-			0	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0 \$	-		0 \$	-			0 \$	-			0	\$ -
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0 \$	-		0 \$	-			0 \$	-			0	\$ -
Earthwork Items																	
1 Site Preparation - Undeveloped	Acre	\$ 9,216			9.55 \$	88,013		16.16 \$	148,945			16.16 \$	148,945			0.00	
2 Total Cut 3 Total Fill	CY CY	\$ 6.00 \$ 6.00			0.00 \$ 0.00 \$	-		0.00 \$ 0.00 \$	-			1042962.96 \$ 521481.48 \$	6,257,778 3,128,889			0.00	
4 Borrow	CY	\$ 13.00			0.00 \$	-		0.00 \$	-			0.00 \$	5,120,007			0.00	\$ -
5 Spoil	CY	\$ 13.00			0.00 \$	-		0.00 \$	=			521481.48 \$	6,779,259			0.00	\$ -
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			0.00 \$ 1.21 \$	- 175,011		0.00 \$ 1.21 \$	175,011			0.00 \$ 0.00 \$	-			0.00	
8 Special Drainage Facilities	5% Ear				\$	13,151		\$	16,198			\$	815,744			0.00	-
Structures, Tunnels, Walls																	
1 Standard Structure	Mile	\$ 34,972,672			0 \$	-		0 \$	-			0 \$	-			0	\$ -
2 High Structure	Mile	\$ 40,424,448			\$	-		\$	=			\$	-				-
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208			\$	-		\$	-			\$	-				• - \$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.02 \$	1,743,360		0.02 \$	1,743,360			\$	-			0.01	697,344
6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312			\$	-		\$	=			\$	-				\$ - \$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896			\$	-		\$	-			\$	-				\$ -
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0 \$	-		0 \$	=			0 \$	-			0.00	\$ -
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000 \$ 106,637,312			\$	-		\$	-			\$	-			0.00 1.21	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			\$	-		\$	-							0.00	
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368			\$	-		\$	-			\$	-				\$ \$
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0 \$	-		0 \$	-			0.00 \$	-			0.00	
14 Trench Short	Mile	\$ 78,843,904			0 \$	-		0 \$	-			0.00 \$	-			0.00	
15 Trench Long 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 57,524,224 \$ 11,848,704			0 \$	-		0 \$	-			1.21 \$	14,362,065			1.21	\$
17 Retaining Walls	Mile	\$ 8,613,888			0 \$	-		0 \$	-			0.00 \$	- 1,552,666			0.00	\$ -
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080			0 \$	-		0 \$	-			0.00 \$	-			0.00	\$ •
Four Track Drill & Blast	Mile	\$ 131,246,080			\$	-		\$	-			0.00 \$	-				\$
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			\$	-		\$	-			0.00 \$	-			0.00	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792			\$ ¢	-		\$	-							0.00	\$ - \$ -
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00 \$	-		0.00 \$	-			1.21 \$	318,172,315			0.00	· \$ -
Grade Senarations																	
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352			\$	-		\$	-			\$	-				\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			1 \$	19,926,528		1 \$	19,926,528			\$	-				\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,759,680 \$ 2,029,568			\$	-		\$	÷			\$	-				\$ \$
4 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Urdeveloped)	ea	\$ 2,029,568 \$ 3,563,520			\$	-		\$	-			\$	-				\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$	-		\$	=			\$	-				\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328			\$	-		\$	=			\$	-				\$ \$
7 Street Bridging HSR Trench	ea	\$ 1,398,784			\$	-		\$	-			3 \$	4,196,352				\$ -
8 Minor Crossing Closures	ea	\$ 87,040			\$	-		\$	-			\$	-				\$ -
Building Items																	
 	1	I	I	ı l	Į	ļ	ı	I		1 !	I	I		1		ı	

COST ELEMENTS	UNIT	UNIT PRICE		At-Grad	e (2 tracks)		Α	t-Grade (4 tracks)			Covere	d Trench			Tunnel (HST only)	
Subsection 6		Base: 2009			Α			Α				A				A	
		(3rd Quarter)	Start: 1765 + 00	End: 1829 + 00	1.21	Miles	Start: 1765 + 00 End: 182	29 + 00 1.21 M	iles	Start: 1765 + 00	End: 1829 + 00	1.21	Miles	Start: 1765 + 00	End: 1829 + 00	1.21	Miles
		(ora eachter)				_											
Subsection Details			01 1 47/5 00	E 1 4000 00	Quant.	Cost	0, 10, 00, 5, 10	Quant.	Cost	CI I 0 00	F 1 0 00	Quant.	Cost	CI I 0 00	F 1 0 00	Quant.	Cost
Double Track At-Grade (Mile)				End: 1829 + 00	1.21 Miles		Start: 0 + 00 End: 0			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 1765 + 00 End: 182			Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Lievaled (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -	Start. 0 1 00		0.00 Willes	\$ -	Start. 0 + 00	0.00 Miles	_	Start. 0 + 00	Elia. 0 1 00	0.00 WIIIC3	\$ -	Start. 0 1 00	Liid. 0 1 00	0.00 Miles	\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -			_				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			0	\$ -		1 \$	15,000,000				\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -			-				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -		9	-				\$ -			0	\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -		9	-			1	\$ 15,000,000	1			\$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -		9	-				\$ -				\$ -
4 Parking - Structures	space	\$ -	1			\$ -		9	-		1		\$ -	.[1		\$ -
5 Parking - At Grade	space	\$ -	1			\$ -		Š	-		1		\$ -	.[1		\$ -
		1	1								1		•	1	1		
Rail & Utility Relocation		1	1								1			1	1		
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -		\$	-				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896	1			\$ -		\$	-		1		\$ -		1		\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -		\$	-				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -		\$	-				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -		\$	-				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -		\$	-				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -		\$	-				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -		\$	-				\$ -				\$ -
ROW (Not Included)																	
ROW required for each segment																	
1 Dense Urban	Acre	\$ 2,786,321				\$ -		\$	-				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -		\$	-				\$ -				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -		\$	-				\$ -				\$ -
4 Suburban	Acre	\$ 208,418				\$ -		\$	-				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -		\$	-				\$ -				\$ -
ROW required for Temp. Construction Easement																	
1 Dense Urban	Acre					\$ -		\$	-				\$ -				\$ -
2 Urban	Acre					\$ -		\$	-				\$ -				\$ -
3 Dense Suburban	Acre					\$ -		\$	-				\$ -				\$ -
4 Suburban	Acre					\$ -		\$	-				\$ -				\$ -
5 Undeveloped	Acre					\$ -		\$	-				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																	
6 Dense Urban	Acre	\$ 2,786,321				\$ -		\$	-				\$ -				\$ -
7 Urban	Acre	\$ 1,371,510				\$ -		\$	-				\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -		\$	-				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				\$ -		\$	-				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -		\$	-				\$ -				\$ -
Environmental Mitigation = 3% Line Costs						\$ 734,754		\$	1,263,045				\$ 11,407,670				\$ 4,500,418
Contain Flaments		1	1								1			1	1		
System Elements	I		1						0.500.05		1		A 0.500.55	1	1		A 0.500.55
1 Signaling (ATC)	Mile	\$ 2,070,000	1		1.21			1.21 \$			1	1.21			1	1.21	\$ 2,509,091
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000	1		1.21			1.21 \$			1	1.21			1	1.21	
3 Wayside Protection System	Mile	\$ 108,000	1		1.21	\$ 130,909		1.21 \$	130,909		1	1.21	\$ 130,909	1	1	1.21	\$ 130,909
Electrification Items		1	1								1			1	1		
1 Traction Power supply	Mile	\$ 1,170,000	1		1.21	\$ 1,418,182		1.21 \$	1,418,182		1	1.21	\$ 1,418,182	1	1	1.21	\$ 1,418,182
2 Traction Power Supply	Mile	\$ 1,170,000	1		1.21			1.21 \$			1	1.21			1	1.21	
Subt		¥ 1,405,000	1		1.21	\$ 31,739,270		1.21 3	49,877,266		 	1.21	\$ 398,176,072		†	1.21	\$ 161,027,066
Program Implementation Costs (per screening)		1	1			\$ 8,093,514		"	12,718,703		1		\$ 101,534,898		1		\$ 41,061,902
Program Implementation Costs (per screening)		1	1			5,075,514		"	12,710,700		1		Ψ 101,00 1 ,070	1	1		÷ 1,001,702
1. 10g. a.i. impromonation 000to		1	1								1			1	1		
Contingencies (per screening) (25%)						\$ 7,934,818			12,469,317				\$ 99,544,018				\$ 40,256,766
·																	
Subtotal			·			\$ 47,767,602		\$	75,065,286				\$ 599,254,989				\$ 242,345,734
Subtotal (Doundard)						¢ 40 000 000			75 000 000				¢ 500 000 000			i i	\$ 242,000,000

Subtotal (Rounded) \$ 48,000,000 \$ 599,000,000 \$ 242,000,000

March 1985	COST ELEMENTS	UNIT	UNIT PRICE			duct (2 tracks)		Elevated Viaduo	ct (4 tracks)			At-Grade	(2 tracks)			At-Grade	(4 tracks)	
	ubsection 6			Start: 1820 ± 00			Miles	מ	U 69 II	Ailes	Start: 1820 ± 00	End: 1865 ± 00	0 AR Milas		Start: 1820 ± 00	Fnd: 1865 ± 00	0.68 Mi	les
The first property of the control of			(3rd Quarter)	Statt. 1829 + 00	E110. 1600 + 00		ivilies	Start. 1027 + 00 E110: 1800 + 00	U.08 IV		Start. 1829 + 00	LIIU. 1000 + UU			Start. 1829 + 00	LIIU. 1600 + 00		
Transferred from Control Contr				Start: 0 : 00	Fnd: 0 = 00		Cost	Start: 0 + 00		Cost	Start: 1920 - 00	End: 1845 - 00		Cost	Start: 0 + 00	Fnd: 0 = 00	Quant.	Cost
Second Column Col												LIIU. 1005 + 00				LIIU. U + UU	0.00 Miles	
The Content and																	0.00 Miles	
Control Cont																	0.00 Miles	
Table					Fnd: 0 : 00											End: 1865 + 00	0.68 Miles	
Section Process Proc					End: 0 + 00					ŀ								
Description																	0.00 Miles	
Substant																		
June Control of States						0	\$ -		0	\$ -				1,431,971			0.00 \$	
Append Part Section						0.68	\$ 3,204,655		0	-				-			0.00 \$	
Section Column						0	\$ -		0	\$ -				-			0.00 \$	
Sept 1950-1959-1959-1959-1959-1959-1959-1959-																		
Sept Company March Sept Sept Company March Sept Sept Company Sept		Milo	¢ 4 200 440			0.00	¢		0.00	¢.			0.00				0.40 ¢	2,863,942
														-			0.68 \$	2,803,942
Sept Text						0.00	\$ -		0.00	\$ 0,407,307				-			0 \$	-
Significant Section March Marc						0	\$ -		0	\$ -			0 \$	-			0 \$	-
Sergin Residence Sergin	Single Track - Total																	
Specific Service Control Service No. 2 2 2, 2006 5 5 5 5 5 5 5 5 5		Mile	\$ 1.549.312			n	\$ -		0	\$ - 			0 \$	-			0 \$	-
Stops Stop	6 Single Track Section - On structure	Mile	\$ 2,350,080			Ö	\$ -		0	\$ -			0 \$	-			0 \$	-
Company Comp	7 Single Track Section - In Tunnel or Subway		\$ 2,350,080			0	\$ -		0	-			0 \$	-			0 \$	-
Coloration Col	8 Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$ -		0	\$ -			0 \$	-			0 \$	-
Coloration Col	9 Freight Double Track - At Grade	Mile	\$ 2,839.552			n	\$ -		0	s - l			0 \$	-			0 \$	-
Sign Programme conversaged						o o	\$ -		0	\$ -			0 \$	-			o s	-
Sign Programme conversaged	Forthwork Homo																	
2		Acro	\$ 0.216				¢		0	¢			5 27 ¢	40 507			9.09 \$	83,782
						0	\$ -		0	\$ - \$ -				49,307			9.09 \$	03,702
Second CV S 120 CV S CV CV CV CV CV CV						0	\$ -		0	\$ -				-			0 \$	-
April 1997 Security From Explaints (1997) April 1997 Security From Explaints (1997) April 1997 Ap	4 Borrow	CY	\$ 13.00											-			0.00 \$	
Security Transport (Princip) (Interval and STOCK) May 5 14,036						0.00	\$ -							-			0.00 \$	
Special processing Parties Special processing														00 444			0.00 \$ 0.68 \$	
Structures, Furness, Walls Structures Mile Structures Structures Mile Structures Structur						0.00	\$ -		0.00	\$ -			0.08 \$				U.08 \$ \$	98,444
Simple Structure Min S 34/77/57 0.68 S 2,845/04 0.68 S 3,845/04 0.68 S 3,845/04 0.68 S 3,845/04 0.68 S 3,845/04 0.68 S S S S S S S S S																		
Section Sect		NA:Lo	¢ 24072472			0.70	¢ 22.04E.004		0.40	¢ 22.04E.004			0 6				0 4	
Score Section Sectio						0.08	φ 23,845,004 \$		U.08	φ 23,845,UU4 \$			0 \$	-			U \$	-
Advantages/Constal, Primary Male 5 85 75 5 5 5 5 5 5 5 5							\$ -			\$ - I			\$	-			\$	-
A From Stage Track Philade Mile S 10,731/24 S S S S S S S S S	4 Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -			\$ -			\$	-			\$	-
This rigile Track TBM (of Miles)							\$ -			\$ -			\$	-			\$	-
STAIN STAN PROVINCE TRANS (PAST PROVINCE) Mile STA7,020,000 S S S S S S S S S							\$ -			\$ - ¢			\$	-			\$	-
Obuside Track Plant & Blast Os S Os S Os Obuside Track Plant (6 Miles) Mile S 148,873.800 S S S S S S Obuside Track Plant (6 Miles) Mile S 108,673.712 S S S S S S S S S							\$ -			\$ -			\$	-			\$	-
Double Track TBM (ch Miles)	9 Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$ -		0	\$ -			0 \$	-			0 \$	-
Double Track TBM w/3rd Tube (6-Miles)	0 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$ -		!	\$ -			\$	-			\$	-
11 Selent Chamber (Full & BlaskMined)																		
12 Corsovers 6	Double Track Teini Wisto Tube (>6 Miles) 1 Seismic Chamber (Drill & Blast/Mined)						\$ -			ا .			¢	_			•	_
13 Cut & Cover Double Track Turnel							\$ -			\$ -			\$	-			\$	-
15 Trent Long	3 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0	\$ -		0	\$ -			0 \$	-			0 \$	-
16 Mechanical & Electrical for Turnels						0	\$ -						0 \$	-			0 \$	-
17 Relating Walls Mile S 8,613,888 0 S							\$ -			\$ -			\$	-			\$	-
18 Containment Walls						0	\$ -		0	Ն -			0 \$	-			0 \$	-
19 Single Track Cut and Cover Subway						0	\$ -		0	\$ -			0 \$	-			0 \$	-
Four Track Drill & Blast Mile \$ 293,775,360 \$ \$. \$. \$		Mile	\$ 131,246,080				\$ -			\$ -			\$	-			\$	-
Four Track TBM (-6 Miles) S 233,274,624 Mile S 233,274,624 Mile S 233,274,624 Mile S 233,414,792 S 262,492,160 O.00 S - O.0							\$ -		!	\$ -			\$	-			\$	-
Four Track TBM w/Rd Tube (>6 Mile \$ 353,441,792 Mile \$ 362,492,160	, ,						\$ -			5 -			\$	-			\$	=
Four Track Cut & Cover Tunnel																		
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) ea \$ 13,284,352 \$ \$ \$ \$ \$ \$ \$ \$ \$						0.00	\$ -		0.00	\$ -			0.00 \$	-			0.00 \$	-
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	Crada Canarationa																	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) ea \$ 19,926,528 ea \$ 2,759,680 \$ \$ - \$ \$ \$ - \$ \$ \$ 19,926,528 \$ \$ - \$ \$ \$ 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) ea \$ 2,029,568 \$ - \$ \$ - \$ \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$		00	¢ 12 204 252				¢			¢			•				, e	
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) ea \$ 2,759,680 \$ \$ - \$ \$ \$ 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) ea \$ 2,029,568 \$ 5 - \$ \$ 5 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) ea \$ 3,554,520 \$ 5 - \$ \$ 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,559,216 \$ 5 - \$ \$ 5 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) ea \$ 3,559,216 \$ 5 - \$ \$ 5 - \$ \$ 5 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) ea \$ 2,850,816 \$ 5 - \$ 5 - \$							\$ -			φ - \$			1 \$	- 19 926 528			1 \$	- 19,926,528
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,563,520 \$ 5 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Suburban) ea \$ 3,593,216 ea \$ 3,593,2							\$ -			\$ -			\ \s\ \ \				\$. , , , 20,020
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)			\$ 2,029,568				\$ -			\$ -			\$	-			\$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -			\$ -			\$	-			\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)							\$ -			\$ -			\$	-			\$	-
7 Street Bridging HSR Trench 8 Minor Crossing Closures ea \$ 1,398,784 ea \$ 87,040 \$ \$ - \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$							\$ -			Ն -			\$	-			\$	-
8 Minor Crossing Closures ea \$ 87,040 \$ - \$ \$ -							\$ -			\$ \$			\$	-			\$	-
							\$ -			\$ -			\$	-			\$	=
Building Items	Building Items	I	1	I	ļ	ı l				ļ	ļ	ı I	ļ		ļ			

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (2 tracks)		Elevated Viad	luct (4 tracks)			At-Grade	(2 tracks)			At-Grade	(4 tracks)	
Subsection 6		Base: 2009			В		В	3				В			E	3	
		(3rd Quarter)	Start: 1829 + 00	End: 1865 + 00	0.68	Miles	Start: 1829 + 00 End: 1865 + 00	0.68	Miles	Start: 1829 + 00	End: 1865 + 00	0.68 Mile	S	Start: 1829 + 00	End: 1865 + 00	0.68	Miles
Cubaration Datella		(* · · ,			0	04		0	04			Ot	04			0	04
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 1020 : 00	End: 1865 + 00	Quant. 0.68 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)				End: 1865 + 00	0.68 Miles		Start: 0 + 00 End. 0 + 00	0.00 Miles		Start: 0 + 00	E110. 1000 + 00	0.00 Miles		Start: 0 + 00	E110. 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00	L110. 1005 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	1	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00 End: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -				\$ -			\$ -			\$	-				\$ -
2 Terminal Passenger Stations	Each					\$ -			\$ -			\$	-				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -			-			\$	-				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -			-			\$	-				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -			-			\$	-				\$ -
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884				\$ -			\$ -			\$	-				\$ -
4 Parking - Structures	space	\$ 123,921,004				- ¢						\$ 6	-				\$ - ¢
5 Parking - Structures	space	\$				ψ <u>-</u>			\$		1	\$ 6	-				\$
of anding At Glade	Space	_				-			_		1	•	-				-
Rail & Utility Relocation											1						
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -			\$ -		1	\$	-				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -			\$ -			\$	-				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -			\$ -			\$	-				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -			\$ -			\$	=				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -			\$ -			\$	-				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -			-			\$	-				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -			-			\$	-				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -			\$ -			\$	-				\$ -
ROW (Not Included)																	
ROW (Not included) ROW required for each segment																	
1 Dense Urban	Acre	\$ 2,786,321				¢			•			¢					¢
2 Urban	Acre	\$ 1,371,510				\$ -			\$ -			\$	-				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -			\$ -			\$	_				\$ -
4 Suburban	Acre	\$ 208,418				\$ -			\$ -			\$	-				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -			\$ -			\$	-				\$ -
ROW required for Temp. Construction Easement																	
1 Dense Urban	Acre					\$ -			\$ -			\$	-				\$ -
2 Urban	Acre					\$ -			\$ -			\$	-				\$ -
3 Dense Suburban	Acre					\$ -			-			\$	-				\$ -
4 Suburban	Acre					\$ -			-			\$	-				\$ -
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					\$ -			\$ -			\$	-				\$ -
6 Dense Urban	Acre	\$ 2,786,321				¢			¢			¢					¢
7 Urban	Acre	\$ 1,371,510				\$ -			\$ -			\$	-				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -			\$ -			Š	_				\$ -
9 Suburban	Acre	\$ 208,418				\$ -			\$ -			\$	-				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -			\$ -			\$	-				\$ -
Environmental Mitigation = 3% Line Costs						\$ 811,490			\$ 907,629			\$	645,415				\$ 689,454
System Elements											1						
1 Signaling (ATC)	Mile	\$ 2,070,000			0.68			0.68				0.68 \$	1,411,364			0.68	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.68			0.68				0.68 \$	368,182			0.68	
3 Wayside Protection System	Mile	\$ 108,000			0.68	\$ 73,636		0.68	\$ 73,636		1	0.68 \$	73,636			0.68	\$ 73,636
Electrification Items											1						
1 Traction Power supply	Mile	\$ 1,170,000			0.68	\$ 797,727		0.68	\$ 797,727		1	0.68 \$	797,727			0.68	\$ 797,727
2 Traction Power Supply	Mile	\$ 1,170,000			0.68			0.68			1	0.68 \$	1,012,500			0.68	
Subtotal		Ψ 1,του,οου			0.00	\$ 31,524,557	 	0.00	\$ 34,825,351		1	\$	25,822,672			0.00	\$ 27,334,670
Program Implementation Costs (per screening)						\$ 8,038,762			\$ 8,880,465		1	Š	6,584,781				\$ 6,970,341
Program Implementation Costs											1						
											1						
Contingencies (per screening) (25%)						\$ 7,881,139			\$ 8,706,338			\$	6,455,668				\$ 6,833,667
Subtotal						\$ 47,444,458			\$ 52,412,154			\$	38,863,121				\$ 41,138,678

Subtotal (Rounded) \$ 47,000,000 \$ 52,000,000 \$ 39,000,000 \$ 41,000,000

COST ELEMENTS	UNIT	UNIT PRICE			Trench		<u> </u>		ed Trench		Ţ	Tunnel ((HST only)	
Subsection 6	_	Base: 2009	Start: 1829 + 00	End: 1865 + 00	B 0.68	3 Miles	Start: 1829 + 00	End: 1865 + 00	B 0.681	Villes	Start: 1829 + 00	End: 1865 + 00	B 0.68 Mile	35
		(3rd Quarter)	a.t. 1027 T UU	1000 T 00			3501 to 1027 T UU	1000 ∓ 00			Start: 1027 T UU	1000 + 00		
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	a. 0 1 00	0.00 Miles	1	Start: 0 + 00	2.74. 0 7 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tranch (Mile)			Start: 0 + 00		0.00 Miles	1	Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	 	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	 	0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles	1	Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 1829 + 00	End: 1865 + 00	0.00 Miles 0.68 Miles	1	Start: 1829 + 00 Start: 0 + 00	End: 1865 + 00 End: 0 + 00	0.68 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total			Jiani. 1027 + 00	Enu. 1003 + 00	U.UO WIITES		Start. 0 + 00	LIIU. U + UU	0.00 WIIIeS		Start. 0 + 00	LIIU. U + UU	U.UU WIIIES	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00		•	ļ ,	0.00				0.00 \$	-
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160	1		0.00 0.00		-	l ,	0.00				0.00 \$ 0.68 \$	- 3,196,109
4 Double Track Section - In Trench		\$ 4,700,160	1	'	0.00		·	l ,	0.00			1	0.00 \$	
Four Track Section - Total			1			1		l i				1		
Four-track Section - At Grade	Mile	\$ 4,200,448	1		0.00			l ,	0.00			1	0.00 \$	-
Four-Track Section - On Structure	Mile	\$ 9,400,320	1		0.00	\$		l ,	0.00	\$ -		1	0.00 \$	-
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320	1		0.00 0.68		- - 	l ,	0.68			'	0.00 \$ 0.00 \$	-
	ivitie	y 7,4UU,32U	1	'	U.68	0,409,305	´ I	l i	0.00	· -		1	0.00 \$	-
Single Track - Total		A	1	'	'	1		l i		.		1		
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080	1		0	\$	·	l i	0 :	•		1	0 \$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080	1		0	\$		l ,	0	\$ -		1	0 \$	-
8 Single Track Section - In Trench	Mile	\$ 2,350,080	1	'	0	1 \$	·	l ,	0			1	0 \$	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552	1		U	\$		l i	0 :	\$ -		1	0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312	1	'	0	\$	-	l i	0	•		1	0 \$	-
Earthwork Items						Ī		l ,				1		ŀ
1 Site Preparation - Undeveloped	Acre	\$ 9,216	1		9.09	\$ 83,782	\	l ,	9.09	\$ 83,782		1	0.00 \$	-
2 Total Cut	CY	\$ 6.00	1		220000.00	\$ 1,320,000		l ,	586666.67	\$ 3,520,000		1	0.00 \$	-
3 Total Fill 4 Borrow	CY CY	\$ 6.00 \$ 13.00	1		0.00 0.00		- i	l ,	293333.33 0.00			1	0.00 \$ 0.00 \$	- I
5 Spoil	CY	\$ 13.00	1		220000.00	\$ 2,860,000		l ,	293333.33	\$ 3,813,333		1	0.00 \$	- - l
6 Landscape erosion Control	Acre	\$ 6,144	1		9.09	\$ 55,855	5	l ,	0.00	\$ -		1	0.00 \$	-
7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	Mile 5% Ear	\$ 144,384 thwork	1		0.68	\$ 98,444 \$ 220,904		l ,	0.00	\$ - \$ 458,856			0.00 \$	- 1
			1	1		1		ļ ,		.35,000				ŀ
Structures, Tunnels, Walls 1 Standard Structure	Mile	\$ 34.972.672	1		0	1 \$	İ	l ,	0	\$		1	0 \$	ŀ
2 High Structure	Mile	\$ 40,424,448	1		, o	\$		l ,	"	\$ -		'	\$	- - l
3 Long Span Structure	Mile	\$ 61,919,232	1			\$.	l ,		\$ -		1	\$	- [
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408	1			1 \$ \$	·	l i	1	\$ - \$ 697,344		1	0.01 \$	697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264	1			\$		l ,		\$ 097,344		1	\$	071,344
7 Twin Single Track TBM (<6 Miles)		\$ 106,637,312	1			1 \$.	·	l ,		\$ -		1	\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680	1		٥	\$	-	l ,	0	\$ -			0.00 \$	- _
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000	1			\$.	l ,		\$ -		1	0.00 \$	- [
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896	1			1	İ	l ,				1	0.68 \$	72,707,258
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile	\$ 176,720,896 \$ 126,205,952	1			\$		l ,		\$ -			\$	-
12 Crossovers	ea	\$ 442,368	1			\$	٠	l ,		\$ -		1	\$	-
13 Cut & Cover Double Track Tunnel 14 Trench Short	Mile Mile	\$ 131,246,080 \$ 78,843,904	1		0.00 0.68		-	l ,	0.00	*		1	0.00 \$ 0.00 \$	- I
15 Trench Long	Mile	\$ 57,524,224	1			\$		l ,	!	\$ -			\$	-
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704	1		0.00		۱ ا	l ,	0.68	\$ 8,078,662		1	0.68 \$	8,078,662
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456	1	'	0.68 0.68			l i	0.00			1	0.00 \$ 0.00 \$	-
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080	1		0.00	\$		l ,		\$ -			\$	-
Four Track Drill & Blast	Mile	\$ 293,775,360	1			1 \$	·	l ,		\$ -		1	\$ 0.00	-
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624	1	'	'	, ⊅	- 	l i		φ -		1	0.00 \$ 0.00 \$	-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792	1			1		l ,				1	\$	- - [
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160	1		0.00	1 \$	-	ļ į	0.68	\$ 178,971,927			0.00 \$	- 1
Grade Separations			1	1		1		ļ ,						ļ
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352	1			1 \$	·	l ,		\$ -		1	\$	- [
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680	1		·	\$	- 	l ,	,	\$		1	\$	- _ [
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568	1			\$		l ,		\$ -		1	\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520	1			1 \$	·	l ,		\$ -		1	\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816	1		·	\$	-	l ,	,	• -			\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328	1			\$ -	٠	l ,	1	\$ -		1	\$	-
7 Street Bridging HSR Trench 8 Minor Crossing Closures		\$ 1,398,784 \$ 87,040	1		1	\$ 1,398,784 \$	¹	l ,	0	\$ - \$ -		1	0 \$	- <u> </u>
Openition Grossity Grosules	ea	\$ 87,040				Φ	·	l ,		ψ -		1	\$	-
Building Items			1			1]	l i			1	1		

COST ELEMENTS	UNIT	UNIT PRICE			Trench				d Trench			Tunnel (HST only)	
Subsection 6		Base: 2009	Ctort. 1000 00		В	Mileo	Ctort. 1000 00		В	O Mileo	Ctort. 1000 00		В	Miles
		(3rd Quarter)	Start: 1829 + 00	End: 1865 + 00	0.68	3 Miles	Start: 1829 + 00	End: 1865 + 00	0.68	8 Miles	Start: 1829 + 00	End: 1865 + 00	0.68	Miles
Subsection Details		•			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1829 + 00	End: 1865 + 00	0.00 Miles 0.68 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	1	Start: 0 + 00	L110. 1005 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	F 10/F 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	1	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) 1 Intermediate Passenger Stations	Each	ļ\$ -	Start: 1829 + 00	End: 1865 + 00	0.68 Miles	\$ -	Start: 0 + 00	End: 0 + 00	0.00 Miles	\$ -	Start: 0 + 00	End: 0 + 00	0.00 Miles	\$ -
2 Terminal Passenger Stations	Each					\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				-				-				\$ -
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each					-				-				\$ -
4 Parking - Structures	space					\$ -				\$ -				\$ -
5 Parking - At Grade	space	*				\$ -				\$ -				\$ -
Rail & Utility Relocation		A 2 200 201				*								•
Single Track Relocation (Temporary) Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896				-				-				
3 Single Track Renoval	Mile	\$ 2,000,896				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				-				-				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -
ROW (Not Included)														
ROW required for each segment														
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -				-
3 Dense Suburban	Acre	\$ 908,134				-				-				\$ -
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				-				-				-
ROW required for Temp. Construction Easement	Acre	\$ 3,042				5 -				5				- ·
1 Dense Urban	Acre					\$ -				\$ -				\$ -
2 Urban	Acre					\$ -				\$ -				\$ -
3 Dense Suburban	Acre					-				\$ -				\$ -
4 Suburban	Acre					\$ -				-				\$ -
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					\$ -				-				\$ -
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -
7 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				-				-				\$ -
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				\$ - ¢ 2.202.1E4				\$ - ¢ 4.112.704				\$ 2 540 201
Environmental willigation - 370 Enre Costs						\$ 2,283,156				\$ 6,113,796				\$ 2,540,381
System Elements														
1 Signaling (ATC)	Mile	\$ 2,070,000			0.68				0.68				0.68	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.68				0.68				0.68	
3 Wayside Protection System	Mile	\$ 108,000			0.68	\$ 73,636			0.68	\$ 73,636			0.68	\$ 73,636
Electrification Items														
1 Traction Power supply	Mile	\$ 1,170,000			0.68	\$ 797,727			0.68	\$ 797,727			0.68	\$ 797,727
2 Traction Power Distribution	Mile	\$ 1,485,000			0.68	\$ 1,012,500			0.68	\$ 1,012,500			0.68	\$ 1,012,500
	ubtotal					\$ 82,051,766				\$ 213,570,419				\$ 90,883,163
Program Implementation Costs (per screening) Program Implementation Costs						\$ 20,923,200				\$ 54,460,457				\$ 23,175,207
i rogram implementation costs														
Contingencies (per screening) (25%)						\$ 20,512,941				\$ 53,392,605				\$ 22,720,791
Subtotal						\$ 123,487,908				\$ 321,423,480				\$ 136,779,160
Subtotal (Doundard)						¢ 122 000 000				¢ 221 000 000				¢ 127 000 000

Subtotal (Rounded) \$ 123,000,000 \$ 321,000,000 \$ 137,000,000

COST ELEMENTS	UNIT	UNIT PRICE	El	levated Viad	luct (2 tracks)		Elevated Viac	luct (4 tracks)			At-Grade	(2 tracks)			At-Grade	(4 tracks)	
Subsection 6		Base: 2009	Start: 1865 + 00 End	(1. 1040 ± 00 T	1.42 M	Milos	Start: 1865 + 00 End: 1940 + 00	C 1.42 Mi	ilos	Start: 1865 + 00	(Fnd: 10/0 ± 00	1.42 M	iloc	Start: 1865 + 00	End: 10/0 ± 00	C 1.42 Mil	ilos
		(3rd Quarter)	Start. 1003 + 00 End	1. 1740 + 00	1.42 1	MIICS	Start. 1003 + 00 Liid. 1740 + 00	1.42 W	iles	3tart. 1003 + 00	L11u. 1740 + 00	1.42 W	illes	Start. 1005 + 00	L110. 1740 + 00	1.42 1/111	163
Subsection Details Pouble Track At Crade (Mile)			Start: 0 + 00 E	nd. 0 . 00	Quant. 0.00 Miles	Cost	Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost	Ctort, 104E . 00	End: 1040 : 00	Quant. 1.42 Miles	Cost	Start: 0 + 00	End. 0 : 00	Quant. 0.00 Miles	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)				nd: 0 + 00 d: 1940 + 00	1.42 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 1865 + 00 Start: 0 + 00	End: 1940 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 0 + 00 Start: 0 + 00 E	nd: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1865 + 00 End: 1940 + 00	0.00 Miles 1.42 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1865 + 00 Start: 0 + 00	End: 1940 + 00 End: 0 + 00	1.42 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	iiu. 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	Liid. 0 + 00	0.00 Miles		Start: 0 + 00	Liiu. 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total		A 0.100.004			0	•						4.40				0.00	
Double Track Section - At Grade Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0 1.42	\$ 6,676,364		0 3	-			1.42 \$ 0.00 \$				0.00 \$ 0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0	\$ -		0 \$	-			0.00 \$				0.00 \$	ŝ .
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0	\$ -		0 \$	-			0.00 \$	-			0.00 \$,
Four Track Section - Total																	
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00			0.00 \$	-			0.00 \$				1.42 \$	\$ 5,966,545
Four-Track Section - On Structure	Mile Mile	\$ 9,400,320			0.00			1.42	13,352,727			0.00	-			0.00 \$,
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile	\$ 9,400,320 \$ 9,400,320			0	\$ -		0 \$	-			0 \$	-			0 \$	\$
Single Track, Total																	
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -		0 \$	-			0 \$	-			0 \$	j.
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$ -		0 \$	-			0 \$	-			0 \$	<i>;</i>
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0	\$ -		0 \$	-			0 \$	- -			0 \$	
Opingie Hack Section - III Helich	iviile	φ ∠,30U,U8U			U	Ψ -		0 3	, -			0 3	p -			0 3	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$ -		0 \$	-			0 \$	-			0 \$; •
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	.		U	-			0 3	-			0 \$	
Earthwork Items		A 0.01/			11.10	4 100.140		10.04	474545			44.40	100110			10.04	474545
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.00			11.19 0.00			18.94 \$ 0.00 \$	174,545			11.19	103,140			18.94 \$	174,545
3 Total Fill	CY	\$ 6.00			0.00			0.00	-			0 \$	-			0 \$	· -
4 Borrow	CY	\$ 13.00			0.00			0.00 \$	-			0.00 \$				0.00 \$, -
5 Spoil	CY	\$ 13.00			0.00			0.00 \$	-			0.00 \$				0.00 \$; •
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			0.00 0.00			0.00 \$	-			0.00 \$ 1.42 \$				0.00 \$ 1.42 \$	• 205,091 \$
8 Special Drainage Facilities	5% Earl				0.00	\$ 5,157		0.00	8,727			1.42	15,412			\$	18,982
Structures, Tunnels, Walls																	
1 Standard Structure	Mile	\$ 34,972,672			1.42	\$ 49,677,091		1.42 \$	49,677,091			0.00 \$	-			0.00 \$, -
2 High Structure	Mile	\$ 40,424,448				\$ -		\$	-			\$	-			\$, -
3 Long Span Structure 4 Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$ -		3	-			3	- t			\$, - t
5 Waterway Crossing - Finnary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$ -		9	-			0.01	871,680			0.01 \$	\$ 871,680
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -		\$	-			\$	-			\$,
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312				\$ -		\$	-			\$	-			\$,
9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0	\$ -		0 3	-			0 4	• - • -			0 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			J	\$ -		9	-			\$	-			\$	į.
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312										\$	-			\$,
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				¢						\$	- -			\$	
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers	ea ea	\$ 126,205,952 \$ 442,368				\$ -		3	-			3	p - \$ -			\$	å
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0			0 \$	-			0 \$	-			0 \$,
14 Trench Short	Mile	\$ 78,843,904			0			0 \$	-			0 \$				0 \$,
15 Trench Long 16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 57,524,224 \$ 11,848,704			0	\$ - \$		0 8	-			0 \$	₽			\$	
17 Retaining Walls	Mile	\$ 11,848,704			0			0 3	, - } -			0 \$	-			0 \$	ŝ
18 Containment Walls	Mile	\$ 5,907,456			0	\$ -		o s	-			o s	-			0 \$	į
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$ -			-			\$	-			\$,
Four Track Drill & Blast Four Track Mined (Soft Soil)	Mile Mile	\$ 293,775,360 \$ 158,400,000				\$ - \$		\$	-			\$	- \$			\$,
Four Track Milled (Soft Soft) Four Track TBM (<6 Miles)	Mile	\$ 158,400,000				Ψ -		3	, -			3	-			\$	ŝ
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792										\$	-			\$	į
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -		0.00 \$	-			0.00 \$	-			0.00 \$	
Grade Separations																	
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -		1	-			\$	- -			\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				\$ -		3	-			3	, - } -			\$	ŝ
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -			-			\$	-			\$	į.
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -		\$	-			\$	-			\$	<i>;</i>
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -			-			\$	-			\$,
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328				\$ -			-			3	- 5 -			\$	å
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -			-			9	-			\$	į.
8 Minor Crossing Closures	ea	\$ 87,040				\$ -		\$	-			\$	-			\$;
Puilding Itoms																	
Building Items	I	I	ı l	l			I	1		l	ı l	I		1 1	l	ı	

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (2 tracks)			Elevated Viado	uct (4 tracks)		At-Grade	e (2 tracks)			At-Grade	e (4 tracks)	
Subsection 6		Base: 2009		-	С			С				С				С	
		(3rd Quarter)	Start: 1865 + 00	End: 1940 + 00	1.42	Miles	Start: 1865 + 00	End: 1940 + 00	1.42 Mil	es	Start: 1865 + 00 End: 1940 + 00	1.42 Mile	es	Start: 1865 + 00	End: 1940 + 00	1.42	Miles
Subsection Details					Quant.	Cost			Quant.	Cost		Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00 End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)			Start: 1865 + 00	End: 1940 + 00	1.42 Miles]	Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	ļ	0.00 Miles	 	Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	F	0.00 Miles	
Four Track Flourted (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	4	Start: 0 + 00	End: 1940 + 00	0.00 Miles 1.42 Miles		Start: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1865 + 00	End: 1940 + 00 End: 0 + 00	1.42 Miles 0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	E110: U + UU	0.00 Miles	1	Start: 1865 + 00 Start: 0 + 00	E110: 1940 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	E110: 0 + 00	0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles	1	Start: 0 + 00	+	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -	514.1.0100		S.SS WIIIOS	\$ -	512.1.0 1 00		\$	-	2.0.00	\$	-	314111 0 1 00		0.00 1411103	\$
2 Terminal Passenger Stations	Each	\$ -				\$ -			\$	-		\$	-				\$
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -			\$	-		0 \$	-			1	\$ 15,000,00
Caltrain Passenger Station - On Structure	Each	\$15,000,000			1	\$ 15,000,000			1 \$	15,000,000		\$	-				\$
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				-			\$	-		\$	-				\$
1 Caltrain Passenger Station - In Trench 3 Maintenance Facility	Each Each	\$15,000,000 \$ 123,921,884				-			\$	-		\$	-				\$
4 Parking - Structures	space	\$ -				\$ -			\$	-		\$	-				Š
5 Parking - At Grade	space	\$ -				\$ -			\$	-		\$	-				\$
	Space					[·			•								
Rail & Utility Relocation																	
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -			\$	-		\$	-				\$
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				-			\$	-		\$	-				\$
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048				-			\$	=		\$	=				\$
4 Major Utility Relocations - Dense Orban 5 Major Utility Relocations - Urban	Mile	\$ 1,548,288 \$ 1,084,416				\$			\$	-		\$	-				\$
6 Major Utility Relocations - Orban	Mile	\$ 775,168				\$ -			\$	-		\$	-				\$
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -			\$	-		\$	-				\$
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -			\$	-		\$	-				\$
ROW (Not Included)																	
ROW required for each segment																	
1 Dense Urban	Acre	\$ 2,786,321				\$ -			\$	-		\$	-				\$
2 Urban	Acre	\$ 1,371,510				-			\$	-		\$	•				\$
3 Dense Suburban 4 Suburban	Acre	\$ 908,134 \$ 208,418				-			\$	-		\$	-				2
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418				\$			\$			\$					\$
ROW required for Temp. Construction Easement	Acic	ψ J₁U+Z				ľ			3			Ψ					*
1 Dense Urban	Acre					\$ -			\$			\$					\$
2 Urban	Acre					\$ -			\$			\$	-				\$
3 Dense Suburban	Acre					\$ -			\$	-		\$	-				\$
4 Suburban	Acre					-			\$	-		\$	-				\$
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					-			\$			\$					\$
6 Dense Urban	Acre	\$ 2,786,321				\$			\$			\$					\$
7 Urban	Acre	\$ 1,371,510				\$ -			\$			\$					\$
8 Dense Suburban	Acre	\$ 908,134				\$ -			\$			\$					\$
9 Suburban	Acre	\$ 208,418				\$ -			\$	-		\$	-				\$
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				\$ - \$ 2,143,853			\$	2,346,393		\$ \$	125,358				\$ \$ 667,105
System Elements	Milo	¢ 2,070,000			1 40	¢ 2040.241			1 42 6	2 040 241		1 40 6	2040 241			1 40	¢ 2040.241
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000 \$ 540,000			1.42 1.42				1.42 \$ 1.42 \$			1.42 \$ 1.42 \$	2,940,341 767,045			1.42 1.42	
Wayside Protection System	Mile	\$ 108,000			1.42				1.42 \$			1.42 \$	153,409			1.42	
Electrification Items																	
1 Traction Power supply	Mile	\$ 1,170,000			1.42				1.42 \$			1.42 \$	1,661,932			1.42	\$ 1,661,932
2 Traction Power Distribution		\$ 1,485,000			1.42				1.42 \$			1.42 \$	2,109,375			1.42	
Program Implementation Costs (per screening)	ıbtotal					\$ 81,237,707 \$ 20,715,615			\$	88,191,586 22,488,854		\$ \$	11,936,056 3,043,694				\$ 30,536,05° \$ 7,786,69°
Program Implementation Costs									ľ								, ,
Contingencies (per screening) (25%)						\$ 20,309,427			\$	22,047,896		\$	2,984,014				\$ 7,634,013
Subtotal						\$ 122,262,749				132,728,337		\$	17,963,764				\$ 45,956,757
Subtotal (Rounded)						\$122,000,000			¢	133 000 000		¢	18 000 000				\$ 46,000,000

 Subtotal (Rounded)
 \$122,000,000
 \$133,000,000
 \$ 18,000,000
 \$ 46,000,000

COST ELEMENTS Subsection 4	UNIT	UNIT PRICE		Open	Trench			Covere	ed Trench			Tunnel ((HST only)	
Subsection 6	-	Base: 2009 (3rd Quarter)	Start: 1865 + 00	End: 1940 + 00	1.42	! Miles	Start: 1865 + 00	End: 1940 + 00	C 1.42 N	Viiles	Start: 1865 + 00	End: 1940 + 00	C 1.42	Miles
Subsection Details			\Box	·	Quant.	Cost	\leftarrow	\Box	Quant.	Cost		←	Quant.	Cost
Subsection Details Double Track At-Grade (Mile) Double Track Elevated (Mile) Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles	Just	Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles	Juat	Start: 0 + 00 Start: 0 + 00 Start: 1865 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00 End: 1940 + 00	0.00 Miles 0.00 Miles 1.42 Miles 0.00 Miles	o⊎at
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile) Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 1865 + 00	End: 0 + 00 End: 0 + 00 End: 1940 + 00	0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles 1.42 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 1865 + 00 Start: 0 + 00	End: 0 + 00 End: 1940 + 00 End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles 1.42 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles 0.00 Miles	
Double Track Section - Total Double Track Section - At Grade Double Track Section - On Structure Double Track Section - In Tunnel or Subway Double Track Section - In Trench	Mile	\$ 2,100,224 \$ 4,700,160 \$ 4,700,160 \$ 4,700,160			0.00 0.00 0.00 0.00	\$ - \$ -			0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	\$ - \$ -			0.00 0.00 1.42 0.00	\$ \$ 6,676,36
Four Track Section - Total Four-track Section - At Grade Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 4,200,448 \$ 9,400,320 \$ 9,400,320 \$ 9,400,320			0.00 0.00 0.00 1.42	\$ - \$ -			0.00 \$ 0.00 \$ 1.42 \$ 0.00 \$	\$ - \$ 13,352,727			0.00 0.00 0.00 0.00	\$
Single Track - Total 5 Single Track Section - At Grade 6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 1,549,312 \$ 2,350,080 \$ 2,350,080 \$ 2,350,080			0 0 0 0	\$ -			0 \$ 0 \$ 0 \$	\$ - \$ -			0 0 0 0	\$ \$ \$ \$
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0	\$ - \$			0 \$				0 0	\$
Earthwork Items 1 Site Preparation - Undeveloped 2 Total Cut 3 Total Fill 4 Borrow 5 Spoil 6 Landscape erosion Control 7 Security Fencing (Both sides of ROW) 8 Special Drainage Facilities	CY CY CY Acre	\$ 9,216 \$ 6.00 \$ 6.00 \$ 13.00 \$ 13.00 \$ 6,144 \$ 144,384			18.94 458333.33 0.00 0.00 458333.33 18.94 1.42	\$ 2,750,000 \$ - \$ - \$ 5,958,333 \$ 116,364			18.94 \$ 1222222.22 \$ 611111.11 \$ 0.00 \$ 611111.11 \$ 0.00 \$ 0.00 \$	\$ 7,333,333 \$ 3,666,667 \$ - \$ 7,944,444 \$ -			0.00 0.00 0.00 0.00 0.00 0.00 0.00	\$ - \$ - \$ -
Structures, Tunnels, Walls 1 Standard Structure 2 High Structure 3 Long Span Structure 4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles) 7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles) Double Track TBM (<6 Miles)	Mile Mile Mile Mile Mile Mile Mile Mile	\$ 34,972,672 \$ 40,424,448 \$ 61,919,232 \$ 85,342,208 \$ 92,049,408 \$ 142,731,264 \$ 106,637,312 \$ 176,720,896 \$ 146,887,680 \$ 79,200,000 \$ 106,637,312 \$ 176,720,896			0	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			0.01	\$ - \$ - \$ 697,344 \$ - \$ -			0 0.01 0.00 1.42 Miles	\$
11 Seismic Chamber (Drill & Blast/Mined) 12 Crossovers 13 Cut & Cover Double Track Tunnel 14 Trench Short 15 Trench Long 16 Mechanical & Electrical for Tunnels 17 Retaining Walls 18 Containment Walls 19 Single Track Cut and Cover Subway Four Track Drill & Blast Four Track TBM (<6 Miles) Four Track TBM (<5 Miles) Four Track Cut & Cover Tunnel	ea ea Mile Mile Mile Mile Mile Mile Mile Mile	\$ 126,205,952 \$ 442,368 \$ 131,246,080 \$ 78,843,904 \$ 57,524,224 \$ 11,848,704 \$ 8,613,888 \$ 5,907,456 \$ 131,246,080 \$ 293,775,360 \$ 158,400,000 \$ 213,274,624 \$ 353,441,792 \$ 262,492,160			0.00 1.42 0.00 1.42 1.42	\$ 111,994,182 \$ - \$ 12,235,636 \$ 8,391,273 \$ - \$ -			1.42 \$ 0.00 \$ 0.00 \$	\$ - \$ 16,830,545 \$ - \$ - \$ - \$ - \$ -			0.00 0.00 1.42 0.00 0.00 0.00	\$
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea ea ea ea ea ea	\$ 262,492,160 \$ 13,284,352 \$ 19,926,528 \$ 2,759,680 \$ 2,029,568 \$ 3,563,520 \$ 3,593,216 \$ 2,850,816 \$ 3,171,328 \$ 1,398,784 \$ 87,040			1	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -			\$ 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	\$ 372,858,182 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -				\$ - \$ - \$ \$ - \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$

COST ELEMENTS	UNIT	UNIT PRICE		Open	Trench			Cover	ed Trench			Tunnel (HST only)	
Subsection 6		Base: 2009			С				С				С	
		(3rd Quarter)	Start: 1865 + 00	End: 1940 + 00	1.42	2 Miles	Start: 1865 + 00	End: 1940 + 00	1.42	2 Miles	Start: 1865 + 00	End: 1940 + 00	1.42	Miles
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 1865 + 00	End: 0 + 00 End: 1940 + 00	0.00 Miles 1.42 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 1865 + 00	End: 1940 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 1865 + 00	End: 0 + 00 End: 1940 + 00	0.00 Miles 1.42 Miles		Start: 1865 + 00 Start: 0 + 00	End: 1940 + 00 End: 0 + 00	1.42 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -	Start: 1800 + 00	E110: 1940 + 00	1.42 Miles	\$ -	Start: 0 + 00	End: 0 + 00	0.00 Miles	\$ -	Start: 0 + 00	End: 0 + 00	0.00 ivilles	\$ -
2 Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				-				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				-			0	\$ -
Caltrain Passenger Station - In Tunnel or Subway 1 Caltrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000				\$ 15,000,000			1	\$ 15,000,000			U	\$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -				\$ -
4 Parking - Structures	space	\$ -				\$ -				\$ -				\$ -
5 Parking - At Grade	space	\$ -				\$ -				\$ -				\$ -
Rail & Utility Relocation														
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				-				-				\$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416 \$ 775,168				-				-				\$ -
7 Major Utility Relocations - Dense Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -
ROW (Not Included)														
ROW required for each segment	A	¢ 270/221				*				*				*
1 Dense Urban 2 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ -				- 4				•
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				-
ROW required for Temp. Construction Easement														
1 Dense Urban	Acre					\$ -				-				\$ -
2 Urban 3 Dense Suburban	Acre Acre					\$ -				\$ -				\$ -
4 Suburban	Acre					\$ -				\$ -				\$ -
5 Undeveloped	Acre					\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6 Dense Urban	Acre	\$ 2,786,321				\$ -				-				-
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -				\$ -				•
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs						\$ 5,161,115				\$ 13,206,376				\$ 5,270,331
System Floments														
System Elements 1 Signaling (ATC)	Mile	\$ 2,070,000			1.42	\$ 2,940,341			1.42	\$ 2,940,341			1.42	\$ 2,940,341
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 2,070,000			1.42				1.42				1.42	
3 Wayside Protection System	Mile	\$ 108,000			1.42				1.42				1.42	
Electrification Items		4 4 7 7 7 7 7 7			ا = : د	A								
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			1.42 1.42				1.42 1.42				1.42 1.42	
	btotal	φ 1,400,000				\$ 2,109,375		1	1.42	\$ 2,109,375		+	1.42	\$ 2,109,375 \$ 188,580,141
Program Implementation Costs (per screening)	~.Jui					\$ 47,131,744				\$ 117,568,005				\$ 48,087,936
Program Implementation Costs														
Continue de la constitución (CECC)						ф 4/ 007 F00				A 115.070.750				d 47.445.005
Contingencies (per screening) (25%)						\$ 46,207,592				\$ 115,262,750				\$ 47,145,035
Subtotal		<u> </u>	I	l l		\$ 278,169,705		I	<u> </u>	\$ 693,881,755				\$ 283,813,112
Subtotal (Doundar)						\$ 270,000,000				\$ 693,881,733				\$ 283,813,112

Subtotal (Rounded) \$ 278,000,000 \$ 694,000,000 \$ 284,000,000

COST ELEMENTS	UNIT			Elevated Viaduct	(2 tracks)			Elevated Viac	duct (4 tracks)			At-Grade	(2 tracks)			At-Grade	e (4 tracks)	
bsection 6		Base: 2009		D)				D				D	
		(3rd Quarter)	Start: 1940 + 00	End: 1970 + 00	0.57 M	iles	Start: 1940 + 00	End: 1970 + 00	0.57 Mi	les	Start: 1940 + 00	End: 1970 + 00	0.57 Mile	es	Start: 1940 + 00	End: 1970 + 00	ں ا 0.57	Miles
bsection Details			61 1 0 00	F 1 0 00	Quant.	Cost	61 1 0 00	F 1 0 00	Quant.	Cost	CL 1 4040 00	E 1 4070 00	Quant.	Cost	CI 1 0 00	F 1 0 00	Quant.	Cost
uble Track At-Grade (Mile) uble Track Elevated (Mile)			Start: 0 + 00 Start: 1940 + 00		0.00 Miles 0.57 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1940 + 00 Start: 0 + 00	End: 1970 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
uble Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
uble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
ur Track Elevated (Mile)			Start: 0 + 00		0.00 Miles			End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
ur Track Tunnel (Mile) ur Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Section - Total			3tart. 0 + 00	'	0.00 Willes		3tart. 0 + 00		0.00 Willes		Start. 0 + 00		0.00 Willes		3tart. 0 + 00		0.00 Willes	
Double Track Section - At Grade	Mile	\$ 2,100,224			0 :	-			0 \$	-			0.57 \$	1,193,309			0.00	\$ -
Double Track Section - On Structure	Mile	\$ 4,700,160			0.57	\$ 2,670,545			0 \$	-			0.00 \$	-			0.00	
Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0 5	-			0 \$	-			0.00 \$	-			0.00	
Double Track Section - In Trench	Mile	\$ 4,700,160			0 :	-			0 \$	-			0.00 \$	-			0.00	\$ -
Four Track Section - Total																		
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	-			0.00 \$	=			0.00 \$	-			0.57	\$ 2,386,618
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00	-			0.57 \$	5,341,091			0 \$	-			0	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0 :	-			0 \$	-			0 \$	-			0	\$ -
Four-Track Section - In Trench	Mile	\$ 9,400,320			0	-			0 \$	-			0 \$	-			0	\$ -
Single Track - Total																		
Single Track Section - At Grade	Mile	\$ 1,549,312			0	-			0 \$	-			0 \$	-			0	\$ -
Single Track Section - On structure	Mile	\$ 2,350,080			0	-			0 \$	-	1		0 \$	-			0	\$ -
Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0 :	-			0 \$	-			0 \$	-			0	\$ -
Single Track Section - In Trench	Mile	\$ 2,350,080			0	-			0 \$	-			0 \$	-			0	\$ -
Freight Double Track - At Grade	Mile	\$ 2,839,552			0				0 \$				0 \$	_			0	\$ -
Freight Single Track - At Grade	Mile	\$ 1,549,312			0	- 1			0 \$	-			0 \$	-			0	\$ -
Earthwork Items																		
Site Preparation - Undeveloped	Acre	\$ 9,216			4.48				7.58 \$	69,818			0.00 \$	-			0.00	\$ -
2 Total Cut 3 Total Fill	CY CY	\$ 6.00 \$ 6.00			0.00				0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 0.00	\$ -
Borrow	CY	\$ 13.00			0.00				0.00 \$	-			0.00 \$	-			0.00	
Spoil	CY	\$ 13.00			0.00				0.00 \$	-			0.00 \$	-			0.00	
Landscape erosion Control	Acre	\$ 6,144			0.00				0.00 \$	-			0.00 \$	-			0.00	
Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00				0.00 \$	- 2.404			0.57 \$	82,036			0.57	
Special Drainage Facilities	5% Eal	rthwork I			;	2,063			\$	3,491			\$	4,102				\$ 4,102
Structures, Tunnels, Walls																		
Standard Structure	Mile	\$ 34,972,672			0.57	\$ 19,870,836			0.57 \$	19,870,836			0.00 \$	-			0.00	\$ -
High Structure	Mile	\$ 40,424,448			5	-			\$	-			\$	-				\$ -
Long Span Structure	Mile	\$ 61,919,232				-			\$	=			\$	-				\$ -
Waterway Crossing - Primary Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408				-			\$	=			0.01 \$	- 871,680			0.01	\$ 871,680
Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				,			\$	-			0.01 \$	071,000			0.01	\$ 671,000
Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312							\$	-			\$	-				\$ -
Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896			5	-			\$	-			\$	-				\$ -
Double Track Drill & Blast	Mile	\$ 146,887,680			0	-			0 \$	-			0 \$	-			0	\$ -
Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)	Mile Mile	\$ 79,200,000				-			\$	=			\$	-				\$ -
Double Track TBM (<0 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 106,637,312 \$ 176,720,896											\$	-				\$ -
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				-			\$	-			\$	-				\$ -
Crossovers	ea	\$ 442,368				-			\$	-			\$	-				\$ -
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0 :	-			0 \$	-			0 \$	-			0	\$ -
Trench Short	Mile	\$ 78,843,904			0 3	-			0 \$	-			0 \$	-			0	\$ -
Trench Long Mechanical & Electrical for Tunnels	Mile Mile	\$ 57,524,224 \$ 11,848,704			0				0 \$	-			0 \$	-			0	\$ -
Retaining Walls	Mile	\$ 8,613,888			0 :				0 \$	_			0 \$				0	\$ -
Containment Walls	Mile	\$ 5,907,456			0 :	-			0 \$	-			0 \$	-			0	\$ -
Single Track Cut and Cover Subway	Mile	\$ 131,246,080				-			\$	-			\$	-				\$ -
Four Track Drill & Blast	Mile	\$ 293,775,360				-			\$	=			\$	-				\$ -
Four Track Mined (Soft Soil)	Mile Mile	\$ 158,400,000				-			\$	-			\$	-				\$ -
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 213,274,624 \$ 353,441,792											\$	-				\$ -
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	-			0.00 \$	-			0.00 \$	-			0.00	\$ -
									[
Grade Separations		A 40.00:																
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352 \$ 19,926,528				j -			\$	-	1		\$	- 39,853,056			3	\$ 39,853,056
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				P -			\$	-	1		2 \$	37,853,056			2	\$ 37,853,056 \$
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Suburban)	ea	\$ 2,029,568				- 1			\$	-			\$	-				\$ -
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				· \$ -			\$	-			\$	-				\$ -
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				-			\$	-	1		\$	-				\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				-			\$	-			\$	-				\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				-			\$	-			\$	-				\$ -
								i .	l ¢	_	1	1	\$	-	ĺ	1		
7 Street Bridging HSR Trench B Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040				-			\$				\$				l	¢

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Via	duct (2 tracks)			Elevated Viad	luct (4 tracks)			At-Grade	e (2 tracks)			At-Grade	e (4 tracks)	
Subsection 6		Base: 2009		i	n)				D				D	
		(3rd Quarter)	Start: 1940 + 00		D 0.57 N	Miles	Start: 1940 + 00	End: 1970 + 00	0.57 N	Miles	Start: 1940 + 00	End: 1970 + 00	D 0.57	Miles	Start: 1940 + 00		0.57	Miles
			Start. 1740 1 00				Start. 1740 1 00	Z.10. 1770 1 00			Start. 1740 1 00				Juli. 1740 1 00			
Subsection Details Powhla Track At Crade (Mile)			Ctort. 0 00	End. 0 00	Quant.	Cost	Ctort. 0 00	End. C OO	Quant.	Cost	Ctort. 1040 00	End. 1070	Quant.	Cost	Ctort. 0 00	End. 0 00	Quant.	Cost
Double Track At-Grade (Mile) Double Track Elevated (Mile)			Start: 0 + 00 Start: 1940 + 00	End: 0 + 00	0.00 Miles 0.57 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1940 + 00 Start: 0 + 00	End: 1970 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00	Elia: 1770 1 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	- I 1070 00	0.00 Miles		Start: 0 + 00	5 1 0 00	0.00 Miles		Start: 1940 + 00		0.57 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 1940 + 00 Start: 0 + 00	End: 19/0 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Building Items																		
1 Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -				\$ -
2 Terminal Passenger Stations Caltrain Passenger Station - At-Grade	Each Each	\$ - \$15,000,000				\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - Ar-Grade Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -
3 Maintenance Facility	Each	\$ 123,921,884				-				-				\$ -				-
4 Parking - Structures	space	\$ -				-								\$ -				\$ -
5 Parking - At Grade	space	•				φ -				· -				φ -				φ -
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile Mile	\$ 130,048 \$ 1,548,288				\$ -				\$ -				\$ -				
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -				\$ -
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$ - ¢				\$ - ¢				\$ -				\$ -
ROW required for Temp. Construction Easement	Acre	\$ 3,042				.				.				Ψ -				-
1 Dense Urban	Acre					\$ -				\$ -				\$ -				\$ -
2 Urban	Acre					\$ -				\$ -				\$ -				\$ -
3 Dense Suburban	Acre					\$ -				\$ -				\$ -				\$ -
4 Suburban 5 Undeveloped	Acre Acre					\$ -				\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					.				.				Ψ -				-
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -
7 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
8 Dense Suburban		\$ 908,134				\$ -				\$ -				\$ -				\$ -
9 Suburban 10 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$				\$				\$				\$
Environmental Mitigation = 3% Line Costs	Acre	y 5,042				\$ 677,541				\$ 758,557				\$ 1,260,125				\$ 1,295,925
System Elements	NA:Lo	\$ 2,070,000			0.53	¢ 117/19/			0.57	\$ 1,176,136			0.53	\$ 1,176,136			0.53	¢ 117/10/
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070,000			0.57 0.57	\$ 1,176,136 \$ 306,818			0.57				0.57 0.57				0.57 0.57	
3 Wayside Protection System	Mile	\$ 108,000			0.57	\$ 61,364			0.57				0.57				0.57	\$ 61,364
Electrification Items		4 4 4 7 2 2 4 7				A			2 ==	==				A				===
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			0.57 0.57	\$ 664,773 \$ 843,750			0.57 0.57				0.57 0.57				0.57 0.57	\$ 664,773 \$ 843,750
	ototal	φ 1,480,000			0.57	\$ 26,315,083			0.57	\$ 29,096,634			0.57	\$ 843,750 \$ 46,317,150			0.57	\$ 843,750 \$ 47,546,258
Program Implementation Costs (per screening)					[\$ 6,710,346				\$ 7,419,642				\$ 11,810,873				\$ 12,124,296
Program Implementation Costs																		
Contingencies (per screening) (25%)						\$ 6,578,771				\$ 7,274,159				\$ 11,579,287				\$ 11,886,565
Containgenties (per surcenting) (20%)		<u></u>			<u> </u>	Ψ 0,310,111	<u> </u>			ψ 1,214,139				Ψ 11,3/7,20/			<u> </u>	Ψ 11,000,000
Subtotal		•				\$ 39,604,200	,			\$ 43,790,435				\$ 69,707,310		•	·	\$ 71,557,118
Subtotal (Pounded)						\$ 40,000,000				\$ 44,000,000				\$ 70,000,000			Į.	\$ 72,000,000

COST ELEMENTS	UNIT	UNIT PRICE		Open	Trench			Covere	ed Trench			Tunnel (HST only)	
Subsection 6		Base: 2009		-)				D				D	
		(3rd Quarter)	Start: 1940 + 00	End: 1970 + 00	ر 0.57	Miles	Start: 1940 + 00	End: 1970 + 00	0.57 Mile	es	Start: 1940 + 00	End: 1970 + 00	ט 0.57 Mile	es
										0 :				0 :
Subsection Details Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Transh (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 1940 + 00	End: 0 + 00 End: 1970 + 00	0.00 Miles 0.57 Miles		Start: 1940 + 00 Start: 0 + 00	End: 1970 + 00 End: 0 + 00	0.57 Miles 0.00 Miles	ŀ	Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total			otal ti 1710 i oo	2.10.1770100			Starti 6 - 66	Zilar o i oo			otal ti o i oo	2.10. 0 . 00		
Double Track Section - At Grade Double Track Section - On Structure	Mile Mile	\$ 2,100,224 \$ 4,700,160			0.00 0.00				0.00 \$	-			0.00 \$ 0.00 \$	
3 Double Track Section - In Tunnel or Subway		\$ 4,700,160			0.00				0.00 \$	-			0.57 \$	2,670,545
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -			0.00 \$	-			0.00 \$	-
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00				0.00 \$	-			0.00 \$	-
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway		\$ 9,400,320 \$ 9,400,320			0.00 0.00				0.00 \$ 0.57 \$	5,341,091			0.00 \$ 0.00 \$	-
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench		\$ 9,400,320 \$ 9,400,320			0.00				0.57 \$	J,341,U91 -			0.00 \$	-
													•	
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			n	\$ -			0 \$	_			0 \$	-
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$ -			0 \$	-			0 \$	-
7 Single Track Section - In Tunnel or Subway		\$ 2,350,080			0	\$ -			0 \$	-			0 \$	-
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0	> -			0 \$	-			0 \$	-
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$ -			0 \$	-			0 \$	-
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -			0 \$	-			0 \$	-
Earthwork Items														
1 Site Preparation - Undeveloped	Acre	\$ 9,216			7.58				7.58 \$	69,818			0.00 \$	-
2 Total Cut 3 Total Fill		\$ 6.00 \$ 6.00			488888.89 0.00				488888.89 \$ 244444.44 \$	2,933,333 1,466,667			0.00 \$ 0.00 \$	-
4 Borrow		\$ 13.00			0.00				0.00 \$	-			0.00 \$	-
5 Spoil		\$ 13.00			488888.89				244444.44 \$	3,177,778			0.00 \$	-
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)		\$ 6,144 \$ 144,384			7.58 0.57				0.00 \$	-			0.00 \$ 0.00 \$	-
8 Special Drainage Facilities	5% Earth					\$ 474,364			\$	382,380			\$	-
Structures, Tunnels, Walls														
1 Standard Structure	Mile	\$ 34,972,672			0	\$ -			0 \$	-			0 \$	-
2 High Structure		\$ 40,424,448				\$ -			\$	-			\$	-
3 Long Span Structure 4 Waterway Crossing - Primary		\$ 61,919,232 \$ 85,342,208				\$ - \$			\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.01	\$ 697,344			0.01 \$	697,344			0.01 \$	697,344
6 Twin Single Track Drill&Blast (<6 Miles)		\$ 142,731,264				\$ -			\$	=			\$	=
7 Twin Single Track TBM (<6 Miles) 8 Twin Single Track TBM w/3rd Tube (<6 Miles)		\$ 106,637,312 \$ 176,720,896				\$ -			\$	-			\$	-
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$ -			0 \$	-			0.00 \$	-
10 Double Track Mined (Soft Soil) Double Track TBM (<6 Miles)		\$ 79,200,000 \$ 106,637,312				\$ -			\$	-			0.00 \$ 0.57 \$	60,589,382
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)		\$ 106,637,312											0.57	00,007,362
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$ -			\$	-			\$	-
12 Crossovers 13 Cut & Cover Double Track Tunnel		\$ 442,368 \$ 131,246,080			Ω	\$ \$			0 \$	-			0.00 \$	-
14 Trench Short	Mile	\$ 78,843,904			0.57	\$ 44,797,673			0.00 \$	-			0.00 \$	-
15 Trench Long 16 Mechanical & Electrical for Tunnels		\$ 57,524,224 \$ 11,848,704			0.00	\$ \$			0.57 \$	- 6,732,218			0.57 \$	- 6,732,218
17 Retaining Walls		\$ 8,613,888			0.00				0.57 \$	U, I JZ,Z 10 -			0.00 \$	U, I JZ,Z 18 -
18 Containment Walls	Mile	\$ 5,907,456			0.57				0.00 \$	-			0.00 \$	-
19 Single Track Cut and Cover Subway Four Track Drill & Blast		\$ 131,246,080 \$ 293,775,360				\$ - \$			\$	-			\$	-
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$ -			\$	-			0.00 \$	-
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792											0.00 \$	-
Four Track Cut & Cover Tunnel		\$ 353,441,792 \$ 262,492,160			0.00	\$ -			0.57 \$	149,143,273			0.00 \$	-
										, .			•	
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			¢	_			¢	_
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)		\$ 19,926,528				\$ -			\$	-			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -			\$	-			\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)		\$ 2,029,568 \$ 3,563,520				\$ - \$			\$	-			\$	-
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)		\$ 3,593,216				\$ -			\$	-			\$	-
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)		\$ 2,850,816				\$ -			\$	-			\$	-
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench		\$ 3,171,328 \$ 1,398,784				\$ - \$			2 \$	2,797,568			\$	-
8 Minor Crossing Closures		\$ 87,040				\$ -			\$	-,,000			\$	-
								1	I I			I I	1	

COST ELEMENTS	UNIT	UNIT PRICE		Open	Trench			Covere	ed Trench		Tunnel	(HST only)	
Subsection 6		Base: 2009)				D			D	
		(3rd Quarter)	Start: 1940 + 00	End: 1970 + 00		/ Miles	Start: 1940 + 00	End: 1970 + 00		Miles	Start: 1940 + 00 End: 1970 + 00	0.57	Miles
Subsection Details					Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	COST	Start: 0 + 00	End: 0 + 00	0.00 Miles	COSI	Start: 0 + 00 End: 0 + 00	0.00 Miles	COST
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 1940 + 00 End: 1970 + 00 Start: 0 + 00	0.57 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00 End: 1970 + 00	0.00 Miles 0.57 Miles		Start: 0 + 00 End: 0 + 00 Start: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Trench (Mile)			Start: 1940 + 00	End: 0 + 00 End: 1970 + 00	0.57 Miles		Start: 1940 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	
Building Items													
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each	\$ -				\$ - \$				\$ -			\$ - \$
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -			\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -			-
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000				\$ -				\$ -			\$ -
3 Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -			\$ -
4 Parking - Structures	space	\$ -				-				\$ -			-
5 Parking - At Grade	space	\$ -				-				-			\$ -
Rail & Utility Relocation													
Single Track Relocation (Temporary) Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896				-				-			\$ -
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile	\$ 2,000,896				\$ -				\$ -			\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -			\$ -
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084,416				-				-			\$ -
7 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168 \$ 464,896				\$ -				\$ -			\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -			\$ -
ROW (Not Included)													
ROW required for each segment 1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -			\$ -
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -			\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -				-			\$ -
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$ -				\$ -			\$ -
ROW required for Temp. Construction Easement		, ,,,,,				*				•			
1 Dense Urban 2 Urban	Acre Acre					-				-			\$ -
3 Dense Suburban	Acre					\$ -				\$ -			\$ -
4 Suburban	Acre					\$ -				\$ -			\$ -
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre					\$ -				\$ -			\$ -
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -			\$ -
7 Urban	Acre	\$ 1,371,510				\$ -				\$ -			\$ -
8 Dense Suburban 9 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ - \$				\$ •			\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -			\$ -
Environmental Mitigation = 3% Line Costs						\$ 2,071,456				\$ 5,182,244			\$ 2,120,685
System Elements													
1 Signaling (ATC)	Mile	\$ 2,070,000			0.57				0.57			0.57	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile	\$ 540,000 \$ 108,000			0.57 0.57				0.57 0.57	\$ 306,818 \$ 61,364		0.57 0.57	\$ 306,818 \$ 61,364
o majorao i fotocitori o gotorii	IVIIIC	y 100,000			0.37	Ψ 01,304			0.57	Ψ 01,304		0.57	Ψ 01,304
Electrification Items	N #11 =	¢ 1170,000			0.53	ф //4770			0.57	¢ //4770		0.57	¢ //4770
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170,000 \$ 1,485,000			0.57 0.57				0.57 0.57			0.57 0.57	
Subto		., .,,			3.07	\$ 74,172,821			5.07	\$ 180,976,555			\$ 75,863,015
Program Implementation Costs (per screening) Program Implementation Costs						\$ 18,914,069				\$ 46,149,021			\$ 19,345,069
Contingencies (per screening) (25%)						\$ 18,543,205				\$ 45,244,139			\$ 18,965,754
Subtotal						\$ 111,630,096				\$ 272,369,715			\$ 114,173,838
Cubtatal (Daumdad)						¢ 112 000 000				¢ 272.000.000			¢ 114 000 000

Subtotal (Rounded) \$ 112,000,000 \$ 272,000,000 \$ 114,000,000

		7A & 7B ((2.9 miles)			7C & 7D (2.8 miles)	
Subsection 7	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel
Capital Cost (\$2009 in Millions) does not include ROW	\$344	\$155	\$615	\$1,433	\$99	\$107	\$540	\$1,323
Acquisition Cost of Permanent ROW	Medium	Highest	Medium	Lowest	Medium	Highest	Medium	Lowest
Notes:	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). Convert Shoreline Blvd to an underpass. 	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). Grade separation at Rengstorff Ave and Castro St. 	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). 	 Caltrain San Antonio and Mountain View stations. Potential HST Mountain View station (costs not included). 	Caltrain Sunnyvale station. Aerial only in the vicinity of Mary Ave.	Caltrain Sunnyvale station. Grade separations at Mary Ave and Sunnyvale Ave.	1 Caltrain Sunnyyalo	1. Caltrain Sunnyvale station.

COST ELEMENTS	UNIT	UNIT PRICE		Elevate	d Viaduct			At-C	Grade		Ор	en Trench			Covered	Trench	
Subsection 7		Base: 2009 (3rd Quarter)	Start: 1970 + 00	End: 2025 + 00	A 1.04	Miles	Start: 1970 + 00	End: 2025 + 00	A 1.04 Mil	es	Start: 1970 + 00 End: 2025 + 0	A 1.04	Miles	Start: 1970 + 00	A End: 2025 + 00	1.04 Mi	iles
Subsection Dedtails		Quarter)			Quant.	Cost			Quant.	Cost		Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	Cost	Start: 1970 + 00	End: 2025 + 00	1.04 Miles	CUSI	Start: 0 + 00 End: 0 + 00	0.00 Miles	COST	Start: 0 + 00	End: 0 + 00	0.00 Miles	CUSI
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)				End: 2025 + 00	1.04 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 End: 0 + 00 Start: 1970 + 00 End: 2025 + 0	0.00 Miles 00 1.04 Miles		Start: 1970 + 00 Start: 0 + 00	End: 2025 + 00 End: 0 + 00	1.04 Miles 0.00 Miles	
Double Track Section - Total			Start. 0 + 00		0.00 Willes		Start. 0 + 00		0.00 Miles		Start. 1770 + 00 End. 2023 + 0	1.04 Willes		Start. 0 + 00	Liid. 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00				1.04 \$	2,187,733		0.00		-		0 \$	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			0.00 0.00				0.00 \$ 0.00 \$	-		0.00 0.00		-		0 \$	
4 Double Track Section - In Trumer of Subway	Mile	\$ 4,700,160 \$ 4,700,160			0.00				0.00 \$	-		0.00				0 \$	
Four Track Section - Total Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	¢			0.00 \$			0.00	¢			0.00 \$	
Four-Track Section - On Structure	Mile	\$ 9,400,320			1.04				0.00 \$	-		0.00				0.00 \$	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$ -			0 \$	-		0.00		-		1.04 \$	9,792,00
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$ -			0 \$	-		1.04	\$ 9,792,000)		0.00 \$	
Single Track - Total																	
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0 \$	-		0	\$ -			0 \$	
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	-			0 \$	-		0	\$ -	-		0 \$	
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0	\$ -			0 \$	-		0	\$			0 \$	
						•							•			1	
9 Freight Double Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312			0	-			0 \$	-		0	\$ -	-		0 \$	
10 Freight Single Track - At Grade	IVIIIe	\$ 1,549,312			U	-			0 \$	-		U	\$ -	•		0 \$	
Earthwork Items																	
1 Site Preparation - Undeveloped	Acre	\$ 9,216			13.89	\$ 128,000			8.21 \$	75,636		13.89				13.89 \$	
2 Total Cut 3 Total Fill	CY CY	\$ 6.45 \$ 6.29			0	\$ -			0.00 \$ 0.00 \$	-		448148.15 0.00		5		1120370.37 \$ 672222.22 \$	
4 Borrow	CY	\$ 12.58			0.00				0.00 \$	-		0.00		-		0.00 \$	
5 Spoil	CY	\$ 12.58			0.00				0.00 \$	-		448148.15				448148.15 \$	
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384			0.00 0.00				0.00 \$ 0.00 \$	-		13.89 1.04				0.00 \$ 0.00 \$	
8 Special Drainage Facilities	5% Eartl				0.00	\$ 6,400			\$	3,782		1.04	\$ 444,623			\$	861,07
Structures, Tunnels, Walls																	
1 Standard Structure	Mile	\$ 34,972,672			1.04	\$ 36,429,867			0 \$	-		0.00	\$ -			0.00 \$	
2 High Structure	Mile	\$ 40,424,448				\$ -			\$	-		0.00	\$ -	-		\$	
3 Long Span Structure	Mile	\$ 61,919,232				-			\$	-			\$ -			\$	
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408			0.02	\$ 1,743,360			0.01 \$	871,680			\$ -			\$	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			0.02	\$ -			\$	-			\$ -			\$	
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				-			\$	-			\$ -			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$ -			0 \$	-		0.00	\$ -			0.00 \$	
10 Double Track Mined (Soft Soil)	Mile	\$ 792,000,000			0.00	\$ -			\$	-		0.00	\$ -	-		\$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312							\$	-							
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952				\$ -			\$	-			\$			\$	
12 Crossovers	ea	\$ 442,368				\$ -			\$	-			\$ -			\$	
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0.00	\$ -			0 \$	-		0.00				0.00 \$	
14 Trench Short 15 Trench Long	Mile Mile	\$ 78,843,904 \$ 57,524,224			0.00	\$ -			0 \$	-		1.04	\$ 82,129,067 \$			0.00 \$	
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			0.00				0 \$	-		0.00	\$ -			1.04 \$	12,342,40
17 Retaining Walls	Mile	\$ 8,613,888			0.00				0 \$	-		1.04				0.00 \$	
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080			0.00	\$ -			0 \$	-		1.04	\$ 6,153,600)		0.00 \$	
Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -			\$	-			\$			\$	
Four Track Mined (Soft Soil)	Mile	\$ 1,584,000,000				\$ -			\$	-			\$ -			\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624							\$	-							
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	\$ -			0.00 \$	-		0.00	\$ -			1.04 \$	273,429,33
		. , = , . 30															.,,50
Grade Separations	20	¢ 10.004.0E0				¢			_				¢				
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528			1	\$ 19,926,528			0 \$	-			\$ -			\$	
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			1	\$ -			\$	-			\$			\$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -			\$	-			\$ -	-		\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,563,520 \$ 3,593,216			0	\$ -			0 \$	=			\$ -			\$	
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,593,216 \$ 2,850,816				\$ -			\$	-			\$.		\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -			\$	-			\$ -			\$	
7 Street Bridging HSR Trench	ea	\$ 1,398,784				-			\$	-		3	\$ 4,196,352	?		\$	
	ea	\$ 87,040		1		>	Î.		\$	-	i		>	· [\$	
8 Minor Crossing Closures									l						1	1	

COST ELEMENTS	UNIT	UNIT PRICE		Elevate	d Viaduct			At-C	Grade		Ope	Trench		Covered Trench	
Subsection 7		Base: 2009 (3rd			Α				A			A		Α	
		Quarter)	Start: 1970 + 00	End: 2025 + 00	1.04	Miles	Start: 1970 + 00	End: 2025 + 00	1.04	Miles	Start: 1970 + 00 End: 2025 + 00	1.04 Miles	Start: 1970 + 00 End: 2	2025 + 00 1.04 Miles	
Subsection Dedtails					Quant.	Cost			Quant.	Cost		Quant. Cost		Quant. Cost	net
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	CUSI	Start: 1970 + 00	End: 2025 + 00	1.04 Miles	Cost	Start: 0 + 00 End: 0 + 00	0.00 Miles	Start: 0 + 00 End:	: 0 + 00 0.00 Miles	151
Double Track Elevated (Mile)			Start: 0 + 00	Liid. 0 1 00	0.00 Miles		Start: 0 + 00	L11d. 2023 1 00	0.00 Miles		Start: 0 + 00	0.00 Miles	Start: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	Start: 0 + 00	0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	Start: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	Start: 0 + 00 End:	: 0 + 00 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	Start: 1970 + 00 End: 2	2025 + 00 1.04 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1970 + 00 End: 2025 + 00	1.04 Miles	Start: 0 + 00 End:	: 0 + 00 0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -		\$	-	\$	-
2 Terminal Passenger Stations	Each					\$ -				\$ -		\$	-	\$	-
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -			1	\$ 15,000,000		\$	-	\$	-
Caltrain Passenger Station - On Structure	Each	\$15,000,000			1	\$ 15,000,000				\$ -		\$	-	\$	-
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -		\$	-	\$	-
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -		1 \$ 15,000	,000	1 \$ 15,00	5,000,000
3 Maintenance Facility	Each					\$ -				\$ -		\$	-	\$	-
4 Parking - Structures	space	\$ -				\$ -				\$ -		\$	-	\$	-
5 Parking - At Grade	space	\$ -	1			\$ -				\$ -		\$	-	\$	-
			1												
Rail & Utility Relocation			1												
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -		\$	-	\$	-
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -		\$	-	\$	-
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -		\$	-	\$	-
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -		\$	-	\$	-
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -		\$	-	\$	-
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -		\$	-	\$	-
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -		\$	-	\$	-
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -		\$	-	\$	-
															ļ
ROW (Not Included)															
ROW required for each segment															
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -		\$		\$	-
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -		\$	/ -	\$	-
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -		\$		\$	-
4 Suburban	Acre	\$ 208,418				\$ -				\$ -		\$	/ -	\$	-
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -		\$		\$	-
ROW required for Temp. Construction Easement	Acre											\$	/ -		
1 Dense Urban	Acre					\$ -				\$ -		\$			
2 Urban	Acre					\$ -				\$ -		\$	/ -		
3 Dense Suburban	Acre					\$ -				\$ -		\$			
4 Suburban	Acre					\$ -				\$ -		\$	/ -		
5 Undeveloped	Acre					\$ -				\$ -		\$			
Right-of-Way Required for Stations, Maintenance & Parking Facilities												\$			
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -		\$		\$	-
7 Urban	Acre	\$ 1,371,510				-				\$ -		\$	/ -	\$	-
8 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -		\$		\$	-
9 Suburban	Acre	\$ 208,418				\$ -				\$ -		\$		\$	-
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -		\$		\$	-
Environmental Mitigation = 3% Line Costs						\$ 2,490,785				\$ 544,165		\$ 4,06	,427	\$ 9,85	9,859,392
Custom Flomento			1												
System Elements	B #11 -	¢ 2.070.000	1		104	¢ 0.15/050			104	¢ 0.457.050		104 6 045	250	104 6 01	2 157 250
1 Signaling (ATC)	Mile	\$ 2,070,000	1		1.04				1.04			1.04 \$ 2,156			2,156,250
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.04				1.04				,500		562,500
3 Wayside Protection System	Mile	\$ 108,000			1.04	\$ 112,500			1.04	\$ 112,500		1.04 \$ 112	500	1.04 \$ 17	112,500
Electrification Items			1												
1 Traction Power supply	Mile	\$ 1,170,000	1		1.04	\$ 1,218,750			1.04	\$ 1,218,750		1.04 \$ 1,218	750	1.04 \$ 1,2	1,218,750
2 Traction Power Distribution	Mile	\$ 1,485,000			1.04				1.04			1.04 \$ 1,546			1,546,875
	ıbtotal	ψ 1,400,000		<u> </u>	1.04	\$ 91,113,814			1.04	\$ 24,279,871		\$ 145,245			4,102,669
Program Implementation Costs (per screening)	.D.O.Cui		1			\$ 23,234,023				\$ 6,191,367		\$ 37,037		\$ 97.7	7,746,181
Program Implementation Costs (per screening)			1			÷ 20,207,020				\$ 5,171,507		\$ 37,03		\$ 67,75	,, 10,101
1 Togram implementation oosts			1												
Contingencies (per screening) (25%)			1			\$ 22,778,454				\$ 6,069,968		\$ 36,31	.301	\$ 86.0	6,025,667
J			1			,,				,,					
Subtotal		•		•	•	\$ 137,126,291	Ì			\$ 36,541,207	·	\$ 218,594	.029	\$ 517,87	1.874.517
Subtotal (Rounded)						\$ 137,000,000	1			\$ 37,000,000	1	\$ 219,000		\$ 518 000	

 Subtotal (Rounded)
 \$ 37,000,000
 \$ 219,000,000
 \$ 518,000,000

COST ELEMENTS	UNIT	UNIT PRICE	Elevated	Viaduct			At-G	rade			Open	Trench		C	overed Trench	
Subsection 7		Base: 2009	E									В			В	
		(3rd Quarter)	Start: 2025 + 00 End: 2125 + 00	1.89 Mile	es .	Start: 2025 + 00	End: 2125 + 00	1.89 N	Miles	Start: 2025 + 00	End: 2125 + 00	1.89 [Viiles	Start: 2025 + 00 End: 2125	+ 00 1.89 Mi	iles
Subsection Dedtails				Quant.	Cost			Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00 End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 +		
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	ŀ	Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Elevated (Mile) Four Track Tunnel (Mile)			Start: 2025 + 00 End: 2125 + 00 Start: 0 + 00	1.89 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	ŀ	Start: 0 + 00 Start: 2025 + 00 End: 2125	0.00 Miles + 00 1.89 Miles	
Four Track Trench (Mile)			Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00 End: 0 +		
Double Track Section - Total																
1 Double Track Section - At Grade	Mile Mile	\$ 2,100,224 \$ 4,700,160		0.00 \$ 0.00 \$	-			0.00				0.00			0.00 \$	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160		0.00 \$	-			0.00				0.00			0.00 \$,
4 Double Track Section - In Trench	Mile	\$ 4,700,160		0.00 \$	-			0.00				0.00			0.00 \$	
Four Track Section - Total																
Four-track Section - At Grade	Mile	\$ 4,200,448		0.00 \$	_			1.89	\$ 7,955,394			0.00	s - l		0.00 \$	1
Four-Track Section - On Structure	Mile	\$ 9,400,320		1.89 \$	17,803,636			0				0.00	\$ -		0.00 \$,
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		0.00 \$	-			0				0.00			1.89 \$	17,803,636
Four-Track Section - In Trench	Mile	\$ 9,400,320		0.00 \$	=			0	\$ -			1.89	\$ 17,803,636		0.00 \$	•
Single Track - Total																
5 Single Track Section - At Grade	Mile	\$ 1,549,312		0 \$	-			0	\$ -			0	-		0 \$	
6 Single Track Section - On structure 7 Single Track Section - In Tunnel or Subway	Mile Mile	\$ 2,350,080 \$ 2,350,080		0 \$	-			0 :				0	\$ - \$		0 \$	
8 Single Track Section - In Trench	Mile	\$ 2,350,080		0 \$	-			0 :				0	\$ -		0 \$	
								_	٨							
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312		0 \$ n \$	-			0	\$ - \$			0	\$ - \$		0 \$	
To Freight Ongle Hack At Orduc	WIIIC	1,047,01Z		9	-			9	· -				-			•
Earthwork Items																
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.45		25.25 \$	232,727			0.00				25.25 1629629.63			25.25 \$ 1629629.63 \$	5 232,727 5 10,513,067
3 Total Fill	CY	\$ 6.29		0 \$	-			0 :				0.00	\$ 10,515,067		814814.81 \$	5,125,120
4 Borrow	CY	\$ 12.58		0.00 \$	-			0.00	\$ -			0.00			0.00 \$	
5 Spoil	CY	\$ 12.58		0.00 \$	-			0.00				1629629.63			814814.81 \$	10,250,240
6 Landscape erosion Control 7 Security Fencing (Both sides of ROW)	Acre Mile	\$ 6,144 \$ 144,384		0.00 \$ 0.00 \$	-			0.00 1.89				25.25 1.89			0.00 \$, -
8 Special Drainage Facilities	5% Eart			\$	11,636			!	\$ 13,673				\$ 1,583,744		\$	1,306,058
Structures Tunnels Walls																
Structures, Tunnels, Walls 1 Standard Structure	Mile	\$ 34,972,672		1.89 \$	66,236,121			٥	\$			0.00	\$ _		0 ¢	
2 High Structure	Mile	\$ 40,424,448		/\$	-			3	\$ -			0.00	\$ -		\$	
3 Long Span Structure	Mile	\$ 61,919,232		\$	-				\$ -				\$ -		\$	
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408		0.02 \$	1,743,360			0.03	\$ 2,615,040				\$ - \$		0.01 \$	697,34
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264		\$	-			0.00	\$ -				\$ -		\$	077,01
7 Twin Single Track TBM (<6 Miles)		\$ 106,637,312		\$	-				-				\$ -		\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680		0.00 \$	-			0	*			0.00	\$ -		\$:
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000		\$	-							0.00	\$ -		\$,
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312														
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)	Mile ea	\$ 176,720,896 \$ 126,205,952		•				I.	\$				¢		•	:
12 Crossovers	ea	\$ 442,368		\$	-				\$ -				\$ -		\$	
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080		0.00 \$	-			0				0.00			0 \$	
14 Trench Short 15 Trench Long	Mile Mile	\$ 78,843,904 \$ 57,524,224		0.00 \$	=			0	\$ - \$ -			1.89	\$ 149,325,576 \$ -		0.00 \$	
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704		0.00 \$	-			0	\$ -			0.00	\$ -		1.89 \$	22,440,72°
17 Retaining Walls	Mile	\$ 8,613,888		0.00 \$	=			0	\$ -			1.89	\$ 16,314,182		0.00 \$	•
18 Containment Walls 19 Single Track Cut and Cover Subway	Mile Mile	\$ 5,907,456 \$ 131,246,080		0.00 \$	=			0				1.89	\$ 11,188,364 \$		0.00 \$:
Four Track Drill & Blast	Mile	\$ 131,246,080 \$ 293,775,360		\$	-								\$ -		\$	ı
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000		\$	-			[]	\$ -				\$ -		\$	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792														
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160		0.00 \$	-			0.00	\$ -			0.00	\$ - l		1.89 \$	497,144,242
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	03	\$ 13,284,352		•					•				•			
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528		1 \$	19,926,528			2	\$ 39,853,056				\$ -		\$,
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680		1 \$	2,759,680				\$ -				\$ -		\$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568 \$ 3,563,520		\$	-			0					\$ -		\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban) 5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea ea	\$ 3,563,520 \$ 3,593,216		U \$	-			0					\$ - \$ -		\$,
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816		\$	-			:	\$ -				\$ -		\$	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328		0 \$	-			0					\$ -		\$	
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040		1 \$	87,040			1 :	\$ 87,040			2 1	\$ 2,797,568 \$ 87,040		0 \$ 	
	Ju	, 07,040		" "	57,040			1	, 07,040			'	, 57,040			
Building Items											1					
			•	•	•	•	•	•				•	•	•	•	

COST ELEMENTS	UNIT	UNIT PRICE		Elevate	d Viaduct		At-G	rade			Open Trench			Covere	d Trench	
Subsection 7		Base: 2009			В		E	3			В				В	
		(3rd Quarter)	Start: 2025 + 00	End: 2125 + 00	1.89 Mile	es	Start: 2025 + 00 End: 2125 + 00	1.89 Miles	Start: 20	25 + 00 End: 21	5 + 00	.89 Miles	Start: 2025 + 00	End: 2125 + 00	1.89	Miles
		(Si di Quai ter)														
Subsection Dedtails					Quant.	Cost		Quant. Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 + 00	0.00 Miles	Start:				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	Start:		0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Turner (Mile)			Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	Start:		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 2025 + 00 End: 2125 + 00	1.89 Miles	Start:		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)				End: 2125 + 00			Start: 0 + 00	0.00 Miles	Start:		0.00 Miles	-	Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	E11d. 2120 1 00	0.00 Miles		Start: 0 + 00	0.00 Miles	Start:				Start: 2025 + 00	End: 2125 + 00	1.89 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	Start: 20				Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -			\$	-		\$	-			1 \$ -			1	\$ -
2 Terminal Passenger Stations	Each	\$ -			\$	-		\$	-			\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000			1 \$	15,000,000		1 \$ 15,00	0,000			\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			\$	-		\$	-			\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$	-		\$	-			0 \$ -			1	\$ 15,000,000
Caltrain Passenger Station - In Trench	Each	\$15,000,000			\$	-		\$	-			1 \$ 15,000,000	'		0	\$ -
3 Maintenance Facility	Each	-			\$	-		\$	-			\$ -				\$ -
4 Parking - Structures	space	-			\$	-		\$	-			\$ -	•			\$ -
5 Parking - At Grade	space	\$ -			\$	-		2	-			\$				\$ -
Rail & Utility Relocation																
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			¢			•				•				•
2 Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$	-		\$	-			Š	. [\$
3 Single Track Removal	Mile	\$ 130,048			\$	_		\$	-			Š -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$	-		\$	-			\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$	-		\$	-			\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$	-		\$	-			\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896			\$	-		\$	-			\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$	-		\$	-			\$ -				\$ -
ROW (Not Included)																
ROW required for each segment																
1 Dense Urban	Acre	\$ 2,786,321			\$	-		\$	-			-				\$ -
2 Urban	Acre	\$ 1,371,510			\$	-		\$	-			-	•			\$ -
3 Dense Suburban 4 Suburban	Acre	\$ 908,134 \$ 208,418			\$	-		\$	-			-				\$ -
5 Undeveloped	Acre Acre	\$ 200,410			\$	-		\$	-			-				
ROW required for Temp. Construction Easement	Acre	\$ 3,042			Φ	•		*	-			-				Ф -
1 Dense Urban	Acre				\$											
2 Urban	Acre				\$	-										
3 Dense Suburban	Acre				\$											
4 Suburban	Acre				\$											
5 Undeveloped	Acre				\$	-										
Right-of-Way Required for Stations, Maintenance & Parking Facilities																
6 Dense Urban	Acre	\$ 2,786,321			\$	-		\$	-			\$ -				\$ -
7 Urban	Acre	\$ 1,371,510			\$	-		\$	-			\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134			\$	-		\$	-			\$ -				\$ -
9 Suburban	Acre	\$ 208,418			\$	-		\$	-			-				\$ -
10 Undeveloped	Acre	\$ 3,642			\$	2.714.022		\$ 1.07	- 020			\$ 7,272,250				\$ -
Environmental Mitigation = 3% Line Costs					\$	3,714,022		\$ 1,97	3,930			\$ 7,373,250	Ί.			\$ 17,415,395
System Elements																
1 Signaling (ATC)	Mile	\$ 2,070,000			1.89 \$	3,920,455		1.89 \$ 3,92	0.455		1	.89 \$ 3,920,455	:1		1.89	\$ 3,920,455
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.89 \$	1,022,727			2,727		l	.89 \$ 1,022,727			1.89	
3 Wayside Protection System	Mile	\$ 108,000			1.89 \$	204,545			4,545			.89 \$ 204,545			1.89	
Electrification Items																
1 Traction Power supply	Mile	\$ 1,170,000			1.89 \$	2,215,909			5,909			.89 \$ 2,215,909			1.89	
2 Traction Power Distribution	Mile	\$ 1,485,000			1.89 \$	2,812,500		1.89 \$ 2,81			1	.89 \$ 2,812,500			1.89	
	btotal				\$	137,690,887		\$ 77,94				\$ 263,324,376				\$ 608,104,693
Program Implementation Costs (per screening)					\$	35,111,176		\$ 19,87	0,009			\$ 67,147,716	1			\$ 155,066,697
Program Implementation Costs																
Contingencies (per screening) (25%)					\$	34,422,722		\$ 19,48	6.931			\$ 65,831,094	.]			\$ 152,026,173
(Lar. 2)					l v	- 111-21122		* 17,40	.,			, 55,001,074				, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Subtotal					\$	207,224,786	, ,	\$ 117,31	1.324		•	\$ 396,303,185	1	•	•	\$ 915,197,563
Subtotal (Rounded)						207,224,700		\$ 117,000				\$ 396,000,000				\$ 915,000,000

 Subtotal (Rounded)
 \$ 207,000,000
 \$ 396,000,000
 \$ 915,000,000

COST ELEMENTS	UNIT	UNIT PRICE			Grade			•	Trench	•			d Trench	
Subsection 7		Base: 2009 (3rd Quarter)	Start: 2125 + 00	End: 2184 + 00	C 1.12 Mi	iles	Start: 2125 + 00	End: 2184 + 00	C 1.12 M	Miles	Start: 2125 + 00	End: 2184 + 00	C 1.12 Mile	es
Subsection Dedtails		(ora Quarter)			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles	CUSI	Start: 0 + 00	End: 0 + 00	0.00 Miles	COST	Start: 0 + 00	End: 0 + 00	0.00 Miles	COST
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 2125 + 00	End: 2184 + 00	0.00 Miles 1.12 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles	
Four Track Trench (Mile)		1	Start: 0 + 00		0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00 \$				0.00	\$ -			0.00 \$	
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.00 \$				0.00				0.00 \$	
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00 \$	-			0.00				0.00 \$	
4 Double Track Section - In Trench	Mile	\$ 4,700,160	1		0.00 \$	-			0.00	\$ -			0.00 \$	
Four Track Section - Total														
Four-track Section - At Grade	Mile	\$ 4,200,448			1.12 \$				0.00	\$ -			0.00 \$	
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00 \$				0.00				0.00 \$	
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile Mile	\$ 9,400,320 \$ 9,400,320			0 \$				0.00 1.12				1.12 \$ 0.00 \$	10,504,14
Four-Track Section - III Trench	IVIIIe	\$ 9,400,320	'		0 \$	-			1.12	\$ 10,504,145			0.00 \$	
Single Track - Total			1											
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0 \$				0	-			0 \$	
6 Single Track Section - On structure	Mile	\$ 2,350,080			0 \$				0	\$ -			0 \$	
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0 \$				0	\$ - \$			0 \$	
Tolongio Hack occitori ili Herich	IVIIIC	2,330,000	1			, -				Ψ -				•
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0 \$				0				0 \$	
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0 \$	-			0	-			0 \$	
Earthwork Items														
1 Site Preparation - Undeveloped	Acre	\$ 9,216			0.00 \$	-			14.90	\$ 137,309			14.90 \$	137,309
2 Total Cut	CY	\$ 6.45			0 \$				961481.48				961481.48 \$	6,202,709
3 Total Fill	CY	\$ 6.29			0 \$				0.00				480740.74 \$	3,023,821
4 Borrow 5 Spoil	CY	\$ 12.58 \$ 12.58			0.00 \$ 0.00 \$				0.00 961481.48				0.00 \$ 480740.74 \$	6,047,642
6 Landscape erosion Control	Acre	\$ 12.50			0.00 \$				14.90				0.00 \$	0,047,042
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			1.12 \$				1.12				0.00 \$	
8 Special Drainage Facilities	5% Eartl	thwork			\$	8,067				\$ 934,409			\$	770,574
Structures, Tunnels, Walls														
1 Standard Structure	Mile	\$ 34,972,672			0.00 \$	-			0.00	\$ -			0 \$	
2 High Structure	Mile	\$ 40,424,448			\$	-			0.00	\$ -			\$	
3 Long Span Structure	Mile	\$ 61,919,232			\$	-			!	\$ -			\$	
Waterway Crossing - Primary Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408			\$	-				\$ -			0.00 \$	
6 Twin Single Track Drill&Blast (<6 Miles)		\$ 142,731,264			\$	-				\$ -			\$	
7 Twin Single Track TBM (<6 Miles)		\$ 106,637,312			\$	-			!	\$ -			\$	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896			\$					\$ -			\$	
9 Double Track Drill & Blast 10 Double Track Mined (Soft Soil)	Mile Mile	\$ 146,887,680 \$ 79,200,000			0 \$				0.00	\$ - ¢			0 \$	
Double Track Nilled (30tt 30tf) Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			\$	-			ľ	φ -			•	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			\$	-								
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952			\$	-				\$ -			\$	
12 Crossovers 13 Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080			1 \$	-			0.00	\$ - ¢			0 \$	
14 Trench Short	Mile	\$ 78,843,904			0 \$, - } -			1.12				0.00 \$	
15 Trench Long	Mile	\$ 57,524,224			\$	-				\$ -			\$	
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			0 \$				0.00				1.12 \$	13,240,029
17 Retaining Walls 18 Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0 \$				1.12 1.12				0.00 \$ 0.00 \$	
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080			0 \$, - } -			1.12	\$ 0,001,135 \$ -			0.00 \$	
Four Track Drill & Blast	Mile	\$ 293,775,360	1		\$	-				\$			\$	
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000			\$	-				\$ -			\$	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792			\$	- :								
Four Track Libri w.3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile	\$ 353,441,792 \$ 262,492,160			0.00 \$	-			0.00	\$ -			1.12 \$	293,315,103
		,2,.00	1						3.03				2	2,2.0,100
Grade Separations			1											
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban) Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea ea	\$ 13,284,352 \$ 19,926,528			\$	- :				\$ ¢			\$	
2 Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				-				\$ -			\$	
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			\$	-				\$			\$	
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			0 \$	-				\$ -			\$	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$	-				-			\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban) 6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea ea	\$ 2,850,816 \$ 3,171,328			\$	- -				\$ - \$			\$	
7 Street Bridging HSR Trench	ea	\$ 1,398,784			\$, - } -			0	\$ -			0 \$	
8 Minor Crossing Closures	ea	\$ 87,040			\$	-			0				0 \$	
			1											
Building Items	i	1	1	Ī	i l		1	1	1		1	1	i 1	

COST ELEMENTS	UNI	T UNIT PRICE	INIT PRICE At-Grade					Open Trench				Covered Trench			
Subsection 7		Base: 2009	Ctort. 212F . 00	End. 2104 : 00	C 1.12 M	ilaa	Ctort. 212F . 00	End. 2104 - 00	C 112	Mileo	Start. 2125 . 00 End. 210	<u>C</u>	12 MH		
		(3rd Quarter)	Start: 2125 + 00	End: 2184 + 00	1.12 M	lies	Start: 2125 + 00	End: 2184 + 00	1.12	Wiles	Start: 2125 + 00 End: 218	4 + 00 1.	.12 Mile	es	
Subsection Dedtails		•			Quant.	Cost			Quant.	Cost		Quant.	I	Cost	
Double Track At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0		4		
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	-		
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	-		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles			
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 2125 + 00	End: 0 + 00 End: 2184 + 00	0.00 Miles 1.12 Miles		Start: 2125 + 00 End: 218 Start: 0 + 00 End: 0		-		
1 Intermediate Passenger Stations	Fac	th \$ -	3td1 t. 0 + 00		0.00 Miles	\$ -	3td11. 2120 + 00	E110. 2104 + 00	1.12 Miles	\$ -	Start. 0 + 00 End. 0	+ 00 0.00 Willes			
2 Terminal Passenger Stations	Eac									\$ -			\$		
Caltrain Passenger Station - At-Grade	Eac				0 5	-				\$ -			\$		
Caltrain Passenger Station - On Structure	Eac				\$	-				\$ -			\$		
Caltrain Passenger Station - In Tunnel or Subway	Eac					-			0	\$ -			0 \$		
Caltrain Passenger Station - In Trench 3 Maintenance Facility	Eac Eac					• - • -			U	\$ -			\$		
4 Parking - Structures	spac					, - \$ -				\$ -			\$		
5 Parking - At Grade		ce \$ -				-				\$ -			\$		
	'														
Rail & Utility Relocation															
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile					5 - t				\$ -			\$		
2 Single Track Relocation (Permanent) 3 Single Track Removal	Mile					, - \$ -				\$ -			\$		
4 Major Utility Relocations - Dense Urban	Mile					\$ -				\$ -			\$		
5 Major Utility Relocations - Urban	Mile					-				\$ -			\$		
6 Major Utility Relocations - Dense Suburban	Mile				\$	-				\$ -			\$		
7 Major Utility Relocations - Suburban	Mile				19	-				-			\$		
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720			3	-				\$ -			\$		
ROW (Not Included)															
ROW required for each segment															
1 Dense Urban	Acre				9	\$ -				\$ -			\$		
2 Urban	Acre				\$	-				\$ -			\$		
3 Dense Suburban	Acre					-				-			\$		
4 Suburban 5 Undeveloped	Acre Acre					- •				\$ -			\$		
ROW required for Temp. Construction Easement	Acre				1	-				•			2		
1 Dense Urban	Acre				9	\$ -									
2 Urban	Acre	:			9	-									
3 Dense Suburban	Acre				\$	-									
4 Suburban	Acre					-									
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre	*			3	-									
6 Dense Urban	Acre	\$ 2,786,321			9	\$ -				\$ -			\$		
7 Urban	Acre					-				\$ -			\$		
8 Dense Suburban	Acre				\$	-				\$ -			\$		
9 Suburban	Acre				3	-				\$ -			\$		
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$ 3,642				1/15 QO2				\$ 4.033,660			\$	0 007 2/	
Environmental Mingenon - 370 Ellic Costs					3	\$ 145,893				\$ 4,033,660			\$	9,997,24	
System Elements															
1 Signaling (ATC)	Mile				1.12				1.12				12 \$		
2 Communications (w/ Fiber Optic Backbone)	Mile Mile				1.12				1.12 1.12				12 \$	603,40	
3 Wayside Protection System	Iville	\$ 108,000			1.12	\$ 120,682			1.12	» 12U,082		1.7	12 \$	120,68	
Electrification Items															
1 Traction Power supply	Mile				1.12				1.12				12 \$		
2 Traction Power Distribution	Mile	\$ 1,485,000			1.12				1.12			1.1	12 \$	1,659,37	
	Subtotal									\$ 144,492,905 \$ 24,045,401			\$	349,242,49	
Program Implementation Costs (per screening) Program Implementation Costs					3	\$ 2,808,290				\$ 36,845,691			\$	89,056,83	
i rogram imprementation costs															
Contingencies (per screening) (25%)					4	\$ 2,753,225				\$ 36,123,226			\$	87,310,62	
<u> </u>													\bot		
Subtotal					•	\$ 16,574,415				\$ 217,461,823			\$	525,609,95	
Subtotal (Rounded)	_	_		_		\$ 17,000,000	_			\$ 217,000,000			_	526 000 00	

 Subtotal (Rounded)
 \$ 17,000,000
 \$ 217,000,000
 \$ 526,000,000

COST ELEMENTS	UNIT		Elevated \			At-Gr				•	Trench				ed Trench	
Subsection 7		Base: 2009	D Start: 2184 + 00 End: 2270 + 00) 1.63 Mile	. <u></u>	D Start: 2184 + 00 End: 2270 + 00	D 1.63 M	liles	Start: 2184 + 00	End: 2270 + 00	D 1.63 N	'iles	Start: 2184 + 00	End: 2270 + 00	D 1.63 N	/liles
			Ottal 1. 2107 T 00 LIIU. 2210 + 00	_		Ctart. 2107 7 00 LIIU. 22/0 + 00			Start. 2104 ± UU	E110. 22/0 + UU			Junt. 2104 † UU	E114. 22/U + UU		
Subsection Dedtails Double Track At-Grade (Mile)			Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00 End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)		i	Start: 0 + 00	0.00 Miles	1	Start: 0 + 00	0.00 Miles	1	Start: 0 + 00	0 1 00	0.00 Miles		Start: 0 + 00	0 1 00	0.00 Miles	
Double Track Tunnel (Mile)		i	Start: 0 + 00	0.00 Miles	ŀ	Start: 0 + 00	0.00 Miles	' F	Start: 0 + 00	<u> </u>	0.00 Miles		Start: 0 + 00	'———	0.00 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)		i	Start: 0 + 00 Start: 2245 + 00 End: 2270 + 00	0.00 Miles 0.47 Miles	 1	Start: 0 + 00 Start: 2184 + 00 End: 2270 + 00	0.00 Miles 1.63 Miles	<u> </u>	Start: 0 + 00 Start: 0 + 00	<u></u>	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)		i	Start: 2184 + 00 End: 2245 + 00	1.16 Miles	1	Start: 0 + 00 End: 0 + 00	0.00 Miles	1	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)		ı	Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	ŀ	Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles	' l	Start: 0 + 00 Start: 2184 + 00	End: 0 + 00 End: 2270 + 00	0.00 Miles 1.63 Miles		Start: 2184 + 00 Start: 0 + 00	End: 2270 + 00 Fnd: 0 + 00	1.63 Miles 0.00 Miles	
Double Track Section - Total	$\overline{}$	 				Start. U T UU		<u>'</u>	otart. ∠184 + 00	LIIU. ZZ/U + 00			Start: 0 + 00	End: 0 + 00	v.vv willes	
1 Double Track Section - At Grade	Mile	\$ 2,100,224		0.00 \$	- 1	[]	0.00		1	1]	0.00			' 1	0 :	\$
Double Track Section - On Structure Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160		0.00 \$ 0.00 \$	- 1	1 1	0.00 \$		1	t j	0.00 \$ 0.00 \$		-	' 1	0	\$ ·
4 Double Track Section - In Trench		\$ 4,700,160		0.00 \$	- -		0.00			1	0.00 \$			' 	0	\$
Four Track Section - Total	B #17	4.00-			1.005					1				' I		\$
Four-track Section - At Grade Four-Track Section - On Structure	Mile Mile	\$ 4,200,448 \$ 9,400,320		0.47 \$ 1.16 \$	1,988,848 10,860,218		1.63		1	t j	0.00 \$		-	' I	0.00	\$ ·
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320		0.00 \$	10,000,218 - 1	1 1	0 5		1	t j	0.00 \$	\$ -		' 1	1.63	\$ 15,311,127
Four-Track Section - In Trench	Mile	\$ 9,400,320		0.00 \$	- 1		0			1	1.63			' I	0.00	
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1540.000			l		1	' <u> </u>		1	1			' l]	\$
5 Single Track Section - At Grade 6 Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080		0 \$ 0 \$	-1	1 1	0 5	· ·	ι	1	0	÷ -		۱ ۱	0	\$
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080		0 \$	- - 1	[]	0	· ·	1	1]	0 8	\$ -		' 1		\$ -
8 Single Track Section - In Trench	Mile	\$ 2,350,080		0 \$	- 1		0	-		1	0 :	\$ -	1	' l	0	\$ -
9 Freight Double Track - At Grade 10 Freight Single Track - At Grade	Mile Mile	\$ 2,839,552 \$ 1,549,312		0 0 \$	- -		0 5	\$ \$			0 1	\$ - \$ -		' 	0 0	\$ - \$ -
Earthwork Items					1	1 1	1	' _*		1	1			'		
1 Site Preparation - Undeveloped	Acre CY	\$ 9,216 \$ 6.45		15.40 \$	141,964	[]	0.00		1	1]	21.72 \$ 700740.74 \$			' 1	21.72 1751851 85	
2 Total Cut 3 Total Fill	CY CY	\$ 6.45 \$ 6.29		0 \$	_1	1 1	0.00 \$	\$ -	ι	1	700740.74 \$ 0.00 \$		1	' l	1751851.85 1051111.11	
4 Borrow	CY	\$ 12.58	:	0.00 \$	- - 1	1 1	0.00	\$ -	ι	1	0.00 \$	\$ -		' l	0.00	\$ -
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 12.58 \$ 6,144		0.00 \$	-1	1 1	0.00	\$ -	ι	1	700740.74 \$ 21.72 \$			' l	700740.74 0.00	\$ 8,815,206 \$
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384		0.00 \$ 0.47 \$	68,364		0.00 S 1.63 S	\$ 235,171	ι	1	21.72 \$ 1.63 \$	\$ 235,171	1	۱ ۱	0.00	\$ -
8 Special Drainage Facilities	5% Earth			\$	10,516		1.55	\$ 11,759		1		\$ 695,229		' I	3.00	\$ 1,346,415
Structures, Tunnels, Walls 1 Standard Structure	Mile	\$ 34,972,672		1.16 \$	40,404,034		0.00	' _{\$}		1	0.00			' l	0.00	\$
2 High Structure	Mile	\$ 40,424,448	s	1.16 \$	40,404,034 _	1	0.00	*\ _1	1	t j	0.00	÷ -		' I	0.00	\$ -
3 Long Span Structure	Mile	\$ 61,919,232	!	\$	- 1	1	1	\$ -1	1	t j	1 \$	\$ -		' I	[\$ -
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408		0.02 \$	1,743,360	1 1	0.01	\$ - \$ 871,680		1	i [§	\$ -	-	۱ ۱		\$ - \$
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264	·	0.02 \$	1,143,36U -	1 1	0.01	\$ -	1	t j	1	; ·		' 1		\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312	2	\$	- 1	1 1	· .	'\$ -	ι	1	1 5	\$ -		۱ ۱		\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast		\$ 176,720,896 \$ 146,887,680		0.00 \$	- 1	1 1	0 5	* *	1	t j	0.00	÷ -	-	' 1	0.00	• - \$
10 Double Track Mined (Soft Soil)	Mile	\$ 174,231,030		\$	- - 1	1 1		\$ -	ι	1	1 0.00	\$ -		۱ ۱	0.00	\$ -
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312	·		١	1 1	1	'\$ -	ι	1	1			۱ ۱		
Double Track TBM w/3rd Tube (>6 Miles) 11 Seismic Chamber (Drill & Blast/Mined)		\$ 176,720,896 \$ 126,205,952		¢	_ 1	1 1		\$	1	t j		t -		' 1	[\$ -
12 Crossovers	ea	\$ 442,368	s	\$	- 1	1 1	· [,	'\$ -1	ι	1	1 3	\$ -		۱ ۱		\$ -
13 Cut & Cover Double Track Tunnel 14 Trench Short	Mile	\$ 131,246,080 \$ 78,843,904		0.00 \$	- 1	[]	0 5		1	1]	0.00 \$ 1.63 \$			' 1	0.00	\$ \$
15 Trench Long	Mile	\$ 57,524,224		\$	-1	1 1	9	\$ -	ι	1	\$	\$ -	-	' l	1	\$ -
16 Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704		0.00 \$	- 1	1 1	0 9	\$ -	ι	1	0.00			۱ ۱	1.63	
17 Retaining Walls 18 Containment Walls		\$ 8,613,888 \$ 5,907,456		0.00 \$ 0.00 \$	- 1	1 1	0 5		1	t j	1.63 \$ 1.63 \$			' 1	0.00	\$ - \$
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080		0.00 \$ \$	- 1	1 1	9	\$ -	ι	1	1.03	. 7,0∠1,993 \$ -		' l	0.00	\$ -
Four Track Drill & Blast	Mile	\$ 293,775,360		\$	- 1	1 1	l .	\$ -	ι	1	1 5	\$ -		۱ ۱		\$ -
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)		\$ 348,462,059 \$ 213,274,624		\$	- 1	1 1		\$ - \$ -	1	t j	1 :	-	-	' 1		-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792	!		1	1		\$ -	1	t j	1			' I		
Four Track Cut & Cover Tunnel		\$ 262,492,160		0.00 \$	-1		0.00	- 1		1	0.00	-		' l	1.63	\$ 427,544,048
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352		d	l		1	\ \$	1	1	1			' 	,	\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528	s	0 \$	- 1	1 1	2	\$ 39,853,056	1	t j	1	· · · · · · · · · · · · · · · · · · ·		' 1		\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680		\$	- 1	1 1		\$ -		1	1 5	\$ -		۱ ۱	[.	\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) 4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520		\$	- 1	1 1	l .	\$ - \$ -	1	t j		-	-	' 1	Į .	\$ - \$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216		\$	- - 1	1		\$ -		1	1 s	Ť -		' 1		\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520		\$	- 1	1 1	1	'\$ -		1	1 5	\$ -		۱ ۱	[.	\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) 7 Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784		\$	- 1	1 1	1	* \$	1	t j	1 2	\$ - \$ 2,797,568	-	' 1	,	\$
8 Minor Crossing Closures		\$ 1,398,784 \$ 87,040		\$	- - 1	1		'\$ - I		1	1 2 3	300,111,5		'	[.	\$ -
Building Items		1			l		1	'	1	1	1			' I		
Samang none	I	1	1 1	I		i i	1	,	I i	I .	ı I		I i	t	1 1	,

COST ELEMENTS	UNIT	UNIT PRICE					At-Grade At-Grade			Open Trench				Covered Trench				
Subsection 7		Base: 2009			D				D				D				D	
			Start: 2184 + 00	End: 2270 + 00	1.63	Miles	Start: 2184 + 00	End: 2270 + 00	1.63	Miles	Start: 2184 + 00	End: 2270 + 00	1.63 N	Miles	Start: 2184 + 00	End: 2270 + 00	1.63	Miles
Subsection Dedtails			01 1 0 00	F 1 0 00	Quant.	Cost	61 1 0 00	F 1 0 00	Quant.	Cost	61 1 0 00	F 1 0 00	Quant.	Cost	01 1 0 00	F 1 0 00	Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Double Track Turner (Wile)			Start: 0 + 00		0.00 Miles	-	Start: 0 + 00		0.00 Miles	-	Start: 0 + 00 Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 2245 + 00	End: 2270 + 00	0.47 Miles		Start: 2184 + 00	End: 2270 + 00	1.63 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 2184 + 00		1.16 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00	L11u. 2245 + 00	0.00 Miles		Start: 0 + 00	Liiu. 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2184 + 00	End: 2270 + 00	1.63 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2184 + 00	End: 2270 + 00	1 63 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1 Intermediate Passenger Stations	Each	\$ -	Start. 0 + 00		0.00 WIIC3	\$ -	Start. 0 1 00		0.00 WIIC3	\$ -	Start. 2104 1 00	L11d. 2270 1 00	1.05 WIIC3	\$ -	Start. 0 1 00	Liid. 0 1 00	0.00 Willes	\$ -
2 Terminal Passenger Stations		\$ -				\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -			1	\$ 15,000,000				\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0	\$ -				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				-				\$ -				\$ -			1	\$ 15,000,000
Caltrain Passenger Station - In Trench	Each	\$15,000,000				-				\$ -			1 9	\$ 15,000,000				\$ -
3 Maintenance Facility	Each	\$ -				\$ -				\$ -				\$ -				\$ -
4 Parking - Structures	space	\$ -				-				\$ -				\$ -				\$ -
5 Parking - At Grade	space	\$ -				\$ -			1	\$ -				\$ -				\$ -
	1	1											[j	
Rail & Utility Relocation						1			1									
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -			1	\$ -				\$ -				\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$ -				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -			9	\$ -				\$ -
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -
4 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement	Acre									\$ -				\$ -				
1 Dense Urban	Acre					\$ -				\$ -				\$ -				
2 Urban	Acre					\$ -				\$ -				\$ -				
3 Dense Suburban	Acre					\$ -				\$ -				\$ -				
4 Suburban	Acre					\$ -				\$ -				\$ -				
5 Undeveloped	Acre					\$ -				\$ -				\$ -				
Right-of-Way Required for Stations, Maintenance & Parking Facilities														\$ -				
6 Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -
7 Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -
9 Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs						\$ 1,656,519				\$ 1,884,399				\$ 5,993,420				\$ 15,162,868
Sustam Flaments						1			1									
System Elements		# 2.070.000			4.0	A 0.74 F01			4.0	A 0.074 FO				h 0.074.F01				A 2.274 FO1
1 Signaling (ATC)	Mile	\$ 2,070,000			1.63				1.63				1.63				1.63	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.63				1.63				1.63				1.63	
3 Wayside Protection System	Mile	\$ 108,000			1.63	\$ 175,909			1.63	\$ 175,909			1.63	\$ 175,909			1.63	\$ 175,909
Electrification Items						1			1									
1 Traction Power supply	Mile	\$ 1,170,000			1/1	\$ 1,905,682			1/2	\$ 1,905,682			1.63	\$ 1,905,682			1/2	\$ 1,905,682
2 Traction Power Distribution	Mile	\$ 1,170,000			1.63 1.63				1.63 1.63				1.63				1.63 1.63	
Z Haction Fower Distribution	Subtotal	\$ 1,400,000			1.03	\$ 65,625,301			1.03	\$ 73,449,181			1.03	\$ 214,525,578			1.03	\$ 529,343,265
Program Implementation Costs (per screening)	Jubiolai					\$ 16,734,452			1	\$ 18,729,541				\$ 214,323,376 \$ 54,704,022				\$ 134,982,532
Program Implementation Costs (per screening)						Ψ 10,734,432			1	ψ 10,727,341				ψ J4,1U4,UZZ				ψ 134,702,332
1 Togram impromontation Costs						1			1									
Contingencies (per screening) (25%)						\$ 16,406,325			1	\$ 18,362,295				\$ 53,631,394				\$ 132,335,816
									1				[. 25,001,071				
Subtotal	,	-	•	•	•	\$ 98,766,077		•	•	\$ 110,541,017		•		\$ 322,860,994		•	•	\$ 796,661,613
C LL LL (D LL I)						Φ 00 000 000	I			"""""""""""""""""""""""""""""""""""""""				¢ 022,000,771	I		ļ	A 707 000 000

Subtotal (Rounded) ######### \$ 323,000,000 \$ 797,000,000

	8A (6.4 miles)	8A (6.4 miles) 8B (0.6 miles)									
Subsection 8	At Grade	Aerial Viaduct (HST Only)	At Grade (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)						
Capital Cost (\$2009 in Millions) does not include ROW	\$125	\$40 (2 tracks)	\$7 (2 tracks)	\$150 (2 tracks)	\$113 (2 tracks)						
Acquisition Cost of Permanent ROW	Highest	Medium	Highest	Lowest	Lowest						
Notes:	Portions of existing alignment are 4-track. Caltrain Lawrence station.										

COST ELEMENTS	UNIT	UNIT PRICE			Grade			
ubsection 8		Base: 2009	Start: 2270 + 00	End: 2610 + 00	A 6.44	Miles		
		(3rd Quarter)	Start: 2270 + 00	E110: 2010 + 00	0.44	wiiie	3	
ubsection Dedtails					Quant.		Cost	
puble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles			
ouble Track Elevated (Mile) ouble Track Tunnel (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles			
ouble Track Turner (Mile)			Start: 0 + 00		0.00 Miles			
our Track Construction/Reconstruction At-Grade (Mile)			Start: 2270 + 00	End: 2610 + 00	6.44 Miles			
our Track Elevated (Mile)			Start: 0 + 00		0.00 Miles			
our Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles			
our Track Trench (Mile)	1		Start: 0 + 00		0.00 Miles			
Double Track Section - Total Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	¢		
2 Double Track Section - At Grade	Mile	\$ 4,700,160			0.00			
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00			
Double Track Section - In Trench	Mile	\$ 4,700,160			0.00			
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$ 4,200,448			6.44		27,048,3	
Four-Track Section - On Structure Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 0.00			
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00			
Tour Huck Section III Henen	IVIIIC	7,100,020			0.00	Ψ		
Single Track - Total]				
5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$		
Single Track Section - On structure	Mile	\$ 2,350,080			0	\$		
Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$		
Single Track Section - In Trench	Mile	\$ 2,350,080]	0	\$		
9 Freight Double Track - At Grade	Mile	\$ 2,839,552]	n	\$		
D Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$		
		1,211,212				•		
Earthwork Items								
1 Site Preparation - Undeveloped	Acre	\$ 9,216			85.86	\$	791,2	
2 Total Cut	CY	\$ 6.45			0	\$		
B Total Fill	CY	\$ 6.29			0	\$		
Borrow	CY	\$ 12.58			0	\$		
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 12.58 \$ 6,144			0 85.86	\$ \$	527,	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00		327,	
8 Special Drainage Facilities	5% Earl				0.00	\$	65,9	
Special Brainage Facilities	070 Edit					Ψ	00,	
Structures, Tunnels, Walls								
1 Standard Structure	Mile	\$ 34,972,672			0	\$		
2 High Structure	Mile	\$ 40,424,448				\$		
3 Long Span Structure	Mile	\$ 61,919,232				\$		
Waterway Crossing - Primary	Mile	\$ 85,342,208			0.04	\$	2.407	
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile Mile	\$ 92,049,408 \$ 142,731,264			0.04	\$	3,486,	
7 Twin Single Track DilliaBlast (<6 Miles)	Mile	\$ 106,637,312				Φ		
Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$		
P Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$		
Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			Ŭ	\$		
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312						
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896						
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$		
2 Crossovers	ea	\$ 442,368				\$		
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0	\$		
Trench Short	Mile	\$ 78,843,904			0	\$		
Trench Long	Mile	\$ 57,524,224				\$		
Mechanical & Electrical for Tunnels Retaining Walls	Mile	\$ 11,848,704			_	\$		
Retaining walls Containment Walls	Mile Mile	\$ 8,613,888 \$ 5,907,456			0	\$ \$		
Single Track Cut and Cover Subway	Mile	\$ 131,246,080			U	\$		
Four Track Drill & Blast	Mile	\$ 293,775,360				\$		
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$		
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624						
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792]				
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160]		\$		
Grade Senarations]				
Grade Separations Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (U	Jrban) ea	\$ 13,284,352				\$		
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (URoadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (UROADWAY UND		\$ 13,284,352				\$		
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (\$2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (\$		\$ 2,759,680			n	\$		
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (U		\$ 2,029,568			Ŭ	\$		
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (U		\$ 3,563,520				\$		
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Si		\$ 3,593,216				\$		
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Ui	ban) ea	\$ 2,850,816			0			
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (U		\$ 3,171,328			Ŭ	\$		
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$		
Minor Crossing Closures	ea	\$ 87,040				\$		

COST ELEMENTS	UNIT	UNIT PRICE		At-0	Grade	
Subsection 8					A	
		Base: 2009 (3rd Quarter)	Start: 2270 + 00	End: 2610 + 00		Miles
		(ora each tor)			0 1	0.1
Subsection Dedtails Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 0 + 00	Liid. 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)			Start: 0 + 00	F1 2/10 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)			Start: 2270 + 00 Start: 0 + 00	End: 2610 + 00	6.44 Miles 0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each	\$ -				\$ -
Caltrain Passenger Station - At-Grade	Each Each	\$ - \$15,000,000			1	\$ - \$ 15,000,000
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ 15,000,000
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3 Maintenance Facility 4 Parking - Structures	Each space	\$ 123,924,884 \$ -				\$ - \$ -
5 Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation	N 423	A 2.000.001				Φ.
1 Single Track Relocation (Temporary) 2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896 \$ 2,000,896				\$ - \$ -
3 Single Track Removal	Mile	\$ 2,000,696				\$ -
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5 Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7 Major Utility Relocations - Suburban 8 Major Utility Relocations - Undeveloped	Mile Mile	\$ 464,896 \$ 30,720				\$ - \$ -
o inajor offinty Relocations - ondeveloped	IVIIIC	\$ 30,720				-
ROW (Not Included)						
ROW required for each segment						
1 Dense Urban	Acre	\$ 2,786,321				\$ - \$ -
2 Urban 3 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -
4 Suburban	Acre	\$ 208,418				\$ -
5 Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement						
1 Dense Urban 2 Urban	Acre Acre					\$ - \$ -
3 Dense Suburban	Acre					\$ -
4 Suburban	Acre					\$ -
5 Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Aoro	¢ 270/221				¢
7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ -
8 Dense Suburban	Acre	\$ 908,134				\$ -
9 Suburban	Acre	\$ 208,418				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs						\$ 1,407,594
System Elements						
1 Signaling (ATC)	Mile	\$ 2,070,000			6.44	
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			6.44	
3 Wayside Protection System	Mile	\$ 108,000			6.44	\$ 695,455
Electrification Items						
1 Traction Power supply	Mile	\$ 1,170,000			6.44	
2 Traction Power Distribution	Mile	\$ 1,485,000			6.44	
Subtota	1					\$ 82,926,244 \$ 21,146,192
Program Implementation Costs (per screening) Program Implementation Costs						ψ ∠1,140,192
Contingencies (per screening) (25%)						\$ 20,731,561
	<u> </u>	j	<u> </u>			4 40
Subtotal						\$ 124,803,997

Subtotal (Rounded) \$ 125,000,000



COST ELEMENTS	UNIT	UNIT PRICE		Elevated Viado	uct (HST only)		At-Grade (H	ST only)			Covered Trea	nch (HST only)		Т	unnel (HST only)	
Subsection 8		Base: 2009		E			В			01 1 7 1 1		В			В	
		(3rd Quarter)	Start: 2610 + 00	End: 2640 + 00	0.57 N	Miles	Start: 2610 + 00 End: 2640 + 00	0.57 Mile	es	Start: 2610 + 00	End: 2640 + 00	0.57 Miles	5	Start: 2610 + 00 End: 264	10 + 00 0.5	57 Miles
Subsection Dedtails					Quant.	Cost		Quant.	Cost			Quant.	Cost		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2610 + 00 End: 2640 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0		
Double Track Elevated (Mile) Double Track Tunnel (Mile)			Start: 2610 + 00 Start: 0 + 00	ENO: 2640 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 2610 + 00	End: 2640 + 00	0.00 Miles 0.57 Miles		Start: 0 + 00 Start: 2610 + 00 End: 264	0.00 Miles 40 + 00 0.57 Miles	-
Double Track Turner (Mile) Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles		Start: 0 + 00	ETIG. 2040 + 00	0.57 Miles 0.00 Miles		Start: 0 + 00 End: 264	0.00 Miles	+
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0		
Four Track Trench (Mile)		1	Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0	+ 00 0.00 Miles	
Double Track Section - Total 1 Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$	_	0.57 \$	1,193,309			0 \$	_		0.0	0 \$
2 Double Track Section - On Structure	Mile	\$ 4,700,160			0.57		5	0.00 \$	-			0 \$	-		0.0	0 \$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00		-	0.00 \$	-			0.57 Miles \$	2,670,545		0.5	7 \$ 2,670,545
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	-	\$	-			0 \$	-		0.0	0 \$
Four Track Section - Total																
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	\$	_	0 \$	_			0.00 \$	_		0.0	0 \$
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00		-	0 \$	-			0.00 \$	-		0.0	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00		-	0.00 \$	=			0.00 \$	-		0.0	
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$	-	\$	-			0.00 \$	-		0.0	0 \$ -
								0								
5 Single Track Section - At Grade	Mile	\$ 1,549,312			n	\$	_	0 \$				0 \$	_			0 \$
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$	-	o \$	-			o \$	-			0 \$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	-	0 \$	-			0 \$	-			0 \$ -
8 Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	-	\$	-			0 \$	-			0 \$ -
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0	¢		0				0 \$				0 \$
10 Freight Single Track - At Grade	Mile	\$ 2,839,552			0	\$	-	0 \$	-			0 \$	-			0 \$ -
		,,			J	•		ا ا								Ţ.
Earthwork Items																
1 Site Preparation - Undeveloped	Acre	\$ 9,216			7.58		3	7.58 \$				0.00 \$	-		0.0	
2 Total Cut 3 Total Fill	CY CY	\$ 6.45 \$ 6.29			0.00	\$	-	0.00 \$	=			611111.11 \$ 366666.67 \$	3,942,400 2,306,304		0.0	
4 Borrow	CY	\$ 12.58				\$		\$	-			0.00 \$	2,300,304		0.0	
5 Spoil	CY	\$ 12.58				\$	-	\$	-			244444.44 \$	3,075,072		0.0	0 \$ -
6 Landscape erosion Control	Acre	\$ 6,144			7.58		5	7.58 \$				0.00 \$	-		0.0	0 \$ -
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00			0.00 \$				0.00 \$			0.0	0 \$ -
8 Special Drainage Facilities	5% Eart	inwork I				\$ 5,81	3	\$	5,818			\$	466,189			-
Structures, Tunnels, Walls																
1 Standard Structure	Mile	\$ 34,972,672			0.57	\$ 19,870,83	5	0 \$	-			0.00 \$	-			0 \$ -
2 High Structure	Mile	\$ 40,424,448				\$	-	\$	-			\$	-			\$ -
3 Long Span Structure	Mile	\$ 61,919,232				\$	-	\$	-			\$	-			\$ -
4 Waterway Crossing - Primary	Mile Mile	\$ 85,342,208				\$	-	\$	-			\$	-			\$ -
5 Waterway Crossing - Secondary (Irrigation Canal) 6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 92,049,408 \$ 142,731,264				\$		\$	-			\$	=			\$
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$	_	\$				\$	-			\$
8 Twin Single Track TBM v/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	-	\$	-			\$	-			\$ -
9 Double Track Drill & Blast	Mile	\$ 146,887,680			0.00	\$	-	0.00 \$	-			0.00 \$	-		0.0	0 \$ -
10 Double Track Mined (Soft Soil)	Mile Mile	\$ 79,200,000				\$	-	\$	-			\$	-		0.57 Mile	\$ 60,589,382
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 106,637,312 \$ 176,720,896													U.57 MIIIG	s a 00,589,382
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,720,896				\$	_	\$				\$	-			\$
12 Crossovers	ea	\$ 442,368				\$	-	\$	-			\$	-			\$
13 Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080				\$	- [\$	-			0.57 \$	74,571,636			\$ -
14 Trench Short 15 Trench Long	Mile	\$ 78,843,904			0.00	\$	-	0.00 \$	-			0.00 \$	-		0.0	0 \$ -
16 Mechanical & Electrical for Tunnels	Mile Mile	\$ 57,524,224 \$ 11,848,704			0.00	\$		\$	-			0.57 \$	6,732,218		0.5	7 \$ 6,732,218
17 Retaining Walls	Mile	\$ 8,613,888			0.00		_	0.00 \$	-			0.00 \$	0,132,210			0 \$
18 Containment Walls	Mile	\$ 5,907,456			0.00		-	0.00 \$				0.00 \$	-			0 \$ -
19 Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	-	\$	-			\$	-			\$
Four Track Drill & Blast	Mile	\$ 293,775,360				\$	- [\$	=			\$	-		2 22 4	
Four Track Mined (Soft Soil)	Mile Mile	\$ 158,400,000 \$ 213,274,624				>	-	\$	-			\$	-		0.00 Mile	
Four Track TBM (<6 Miles) Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 213,274,624 \$ 353,441,792														\$
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	-	\$	-			0.00 \$	-		0.0	0 \$
]														
Grade Separations		4 40 05 :				•										
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	-	\$	-			\$	-			\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban) 2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea ea	\$ 19,926,528 \$ 2,759,680				\$		0 \$	-			\$	-			\$
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,739,000				\$	_	\$	-			\$	-			\$
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$	-	\$	-			\$	-			\$
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$	-	\$	-			\$	-			\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$	-	0 \$	-			\$	-			\$
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$	-	\$	-			\$	-			\$
7 Street Bridging HSR Trench 8 Minor Crossing Closures	ea ea	\$ 1,398,784 \$ 87,040				\$		\$	-			\$	-			-
Opinior Grossing Grosures	ea	φ 07,040				Ψ		2	-			→	-			Ψ -
Building Items]														
I Inninguid isems	I	I	1 1		l		1 1	I		ı l		ı l		1	I	I

COST ELEMENTS	UNIT	UNIT PRICE	`			At-Grade (HST only)		Covered Trench (HST only)				Tunnel (HST only)					
Subsection 8		Base: 2009		E			E	,			В			<u></u>		В	
		(3rd Quarter)	Start: 2610 + 00	End: 2640 + 00	0.57 l	Miles	Start: 2610 + 00 End: 2640 + 00	0.57 N	Miles	Start: 2610 + 00	End: 2640 + 00	0.57 Mile:	S	Start: 2610 + 00	End: 2640 + 00	0.57	Miles
Subsection Dedtails		<u> </u>			Quant.	Cost		Quant.	Cost			Quant.	Cost	 		Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2610 + 00 End: 2640 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				End: 2640 + 00	0.57 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	- L 0/10 00	0.00 Miles		Start: 0 + 00	E 1 0/10 00	0.00 Miles	
Double Track Tunnel (Mile) Double Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	0.00 Miles 0.00 Miles		Start: 2610 + 00 Start: 0 + 00	End: 2640 + 00	0.57 Miles 0.00 Miles		Start: 2610 + 00 Start: 0 + 00	End: 2640 + 00	0.57 Miles 0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile) 1 Intermediate Passenger Stations	Each	¢	Start: 0 + 00		0.00 Miles	¢	Start: 0 + 00	0.00 Miles	¢	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	¢
2 Terminal Passenger Stations	Each	\$ -				\$ -			\$ -			\$	-	, ,			\$ -
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -			\$ -			\$	-	, ,			\$ -
Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -			\$ -			\$	-	, ,			\$ -
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each	\$15,000,000 \$15,000,000				\$ -			\$ -			0 \$	-	, ,			\$ -
3 Maintenance Facility	Each	\$ 123,924,884				\$ -			\$ -			\$	-	, ,			\$ -
4 Parking - Structures	space	\$ -				\$ -			\$ -			\$	-	, !			\$ -
5 Parking - At Grade	space	\$ -				\$ -			\$ -			\$	-	, !			\$ -
Rail & Utility Relocation														, !			
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -			\$ -			\$	-	, ,			\$ -
2 Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -			\$ -			\$	-	, !			\$ -
3 Single Track Removal	Mile	\$ 130,048				\$ -			\$ -			\$	-	, !			\$ -
4 Major Utility Relocations - Dense Urban 5 Major Utility Relocations - Urban	Mile Mile	\$ 1,548,288 \$ 1,084,416				\$ -			\$ -			\$	-	, ,			\$ -
6 Major Utility Relocations - Orban	Mile	\$ 1,084,416				\$ -			\$ -			\$	-	, ,			\$ -
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -			\$ -			\$	-	, ,			\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -			\$ -			\$	-	, ,			\$ -
ROW (Not Included)														, l			
ROW (Not included) ROW required for each segment														, ,			
1 Dense Urban	Acre	\$ 2,786,321				\$ -			\$ -			\$	-				\$ -
2 Urban	Acre	\$ 1,371,510				\$ -			\$ -			\$	-				\$ -
3 Dense Suburban	Acre	\$ 908,134				\$ -			\$ -			\$	-				\$ -
4 Suburban 5 Undeveloped	Acre Acre	\$ 208,418 \$ 3,642				\$ -			\$ -			\$	-				\$ -
ROW required for Temp. Construction Easement	7.0.0	0,012				*			•			*					*
1 Dense Urban	Acre					\$ -			\$ -								\$ -
2 Urban	Acre					\$ -			\$ -								\$ -
3 Dense Suburban 4 Suburban	Acre Acre					\$ -			\$ -								\$ -
5 Undeveloped	Acre					\$ -			\$ -								\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																	
6 Dense Urban	Acre	\$ 2,786,321				\$ -			\$ -			\$	-				\$ -
7 Urban 8 Dense Suburban	Acre Acre	\$ 1,371,510 \$ 908,134				\$ -			\$ -			\$	-				\$ -
9 Suburban	Acre	\$ 208,418				\$ -			\$ -			\$	-				\$ -
10 Undeveloped	Acre	\$ 3,642				\$ -			\$ -			\$	-				\$ -
Environmental Mitigation = 3% Line Costs						\$ 679,907			\$ 39,465			\$	2,812,931	, l			\$ 2,099,764
System Elements														, !			
1 Signaling (ATC)	Mile	\$ 2,070,000			0.57			0.57	\$ 1,176,136			0.57 \$	1,176,136	, ,		0.57	\$ 1,176,136
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.57			0.57				0.57 \$	306,818	, !		0.57	\$ 306,818
3 Wayside Protection System	Mile	\$ 108,000			0.57	\$ 61,364		0.57	\$ 61,364			0.57 \$	61,364	, !		0.57	\$ 61,364
Electrification Items														, ,			
1 Traction Power supply	Mile	\$ 1,170,000			0.57			0.57				0.57 \$	664,773	, ,		0.57	\$ 664,773
2 Traction Power Distribution	Mile	\$ 1,485,000	-		0.57			0.57				0.57 \$	843,750			0.57	
Subtota Program Implementation Costs (per screening)	"					\$ 26,396,311 \$ 6,731,059			\$ 4,407,797 \$ 1,123,988			\$ ¢	99,630,137 25,405,685	, ,			\$ 75,144,751 \$ 19,161,911
Program Implementation Costs (per screening)						Ψ 0,131,037			Ψ 1,123,700			*	20,700,000	, ,			Ψ 17,101,711
														, ,			
Contingencies (per screening) (25%)						\$ 6,599,078			\$ 1,101,949			\$	24,907,534	, ,			\$ 18,786,188
Subtotal			1			\$ 39,726,449			\$ 6,633,734			¢	149,943,356				\$ 113,092,850
Subtotal (Dounded)						\$ 39,720,449			\$ 7,000,000				149,943,330				\$ 113,092,830 \$ 112,000,000

Subtotal (Rounded) \$ 7,000,000 \$ 150,000,000 \$ 113,000,000

			9(a)B (0.9 miles)		
Subsection 9(a)	Aerial Viaduct (HST Only)	At Grade (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)	Aerial Viaduct (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$160 (2 tracks)	\$54 (2 tracks)	\$594 (2 tracks)	\$484 (2 tracks)	\$248 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Highest	Lowest	Lowest	Medium
Notes:		1. Caltrain Santa Clara station reconstructed to allow for 2 HST tracks. 2. Convert Hedding St to an underpass.	Caltrain Santa Clara station reconstructed to allow for 2 HST tracks.		1. HST San Jose station.

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Viac	duct (HST only)			At-Grade	(HST only)			Covered Tren	nch (HST only)			Tunnel (HS	ST only)	
Subsection 9 (a)		Base: 2009	Start: 26/0 : 00	End: 2760 + 00	A 2.27	Miles	Start: 26/0 : 00	End: 2760 + 00	A 2.27 Mil	les	Start: 2640 + 00	End: 2760 + 00	A 2.27 Mile:	-	Start: 2640 + 00	A End: 2760 + 00	2.27	Miles
		(3rd Quarter)	3tart. 2040 + 00	L11d. 2700 + 00		MIIICS	Start. 2040 + 00	LIIU. 2700 + 00			3tart. 2040 + 00	L11u. 2700 + 00	Z.Z7 Wille	3	Start. 2040 + 00	L11d. 2700 + 00	2.21	VIIIeS
Subsection Dedtails Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 2640 ± 00	End: 2760 + 00	Quant. 2.27 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
Double Track Elevated (Mile)			Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 0 + 00	E11d. 2700 1 00	0.00 Miles		Start: 0 + 00	Elia. 0 1 00	0.00 Miles		Start: 0 + 00	Elia. 0 1 00	0.00 Miles	
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles	
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile) Four Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles		Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total			Start. 0 + 00		0.00 Miles		Start. 0 + 00		0.00 Willes		Start. 0 + 00	Liid. 0 + 00	0.00 Miles		Start. 0 + 00	Liid. 0 + 00	0.00 Miles	
1 Double Track Section - At Grade	Mile	\$ 2,100,224			0	\$ -			2.27 \$	4,773,236			0.00 \$	-			0.00	
2 Double Track Section - On Structure 3 Double Track Section - In Tunnel or Subway	Mile Mile	\$ 4,700,160 \$ 4,700,160			2.27 0	\$ 10,682,182 \$			0.00 \$ 0.00 \$	-			0.00 \$ 2.27 \$	10,682,182			0.00 2.27	
4 Double Track Section - In Trench	Mile	\$ 4,700,160			0	\$ -			0.00 \$	-			0.00 \$	-			0.00	
Four Track Section - Total																		
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00				0.00 \$	-			0.00 \$	-			0.00	
Four-Track Section - On Structure	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 0.00	\$ -			0.00 \$ 0.00 \$	-			0.00 \$ 0.00 \$	-			0.00 0.00	
Four-Track Section - In Tunnel or Subway Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00				0.00 \$	-			0.00 \$	-			0.00	
Single Track - Total 5 Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -			0 \$	_			0 \$	_			0	\$ -
6 Single Track Section - On structure	Mile	\$ 2,350,080			0	\$ -			0 \$	-			0 \$	-			0	\$ -
7 Single Track Section - In Tunnel or Subway 8 Single Track Section - In Trench	Mile Mile	\$ 2,350,080 \$ 2,350,080			0	\$ -			0 \$	-			0 \$	-			0	\$ -
opaniye Hack Section - III Hench	iville				0	φ -			0 \$	-			0 \$	-			U	φ -
9 Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$ -			0 \$	-			0 \$	-			0	\$ -
10 Freight Single Track - At Grade	Mile	\$ 1,549,312			0	>			0 \$	-			0 \$	-			0	> -
Earthwork Items																		
1 Site Preparation - Undeveloped 2 Total Cut	Acre CY	\$ 9,216 \$ 6.45			17.91 0.00				17.91 \$ 0.00 \$	165,025			17.91 \$ 1155555.56 \$	165,025 7,454,720			0.00 977777.78	
3 Total Fill	CY	\$ 6.29			0.00	\$ -			0.00 \$	-			577777.78 \$	3,634,176			0.00	
4 Borrow	CY	\$ 12.58			0.00	\$ -			0.00 \$	-			0.00 \$	7.0/0.050			0.00	
5 Spoil 6 Landscape erosion Control	CY Acre	\$ 12.58 \$ 6,144			0.00 0.00	\$ -			0.00 \$ 0.00 \$	-			577777.78 \$ 0.00 \$	7,268,352			977777.78 0.00	
7 Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	\$ -
8 Special Drainage Facilities	5% Ear	thwork 				\$ 8,251			\$	8,251			\$	926,114				\$ 930,406
Structures, Tunnels, Walls																		
1 Standard Structure 2 High Structure	Mile Mile	\$ 34,972,672 \$ 40,424,448			2.27	\$ 79,483,345			0.00 \$	-			0 \$	-			0	\$ -
3 Long Span Structure	Mile	\$ 61,919,232				\$ -			\$	-			\$	-				\$ -
4 Waterway Crossing - Primary 5 Waterway Crossing - Secondary (Irrigation Canal)	Mile Mile	\$ 85,342,208 \$ 92,049,408			0.01	\$ 871,680			\$	-			0.01 \$	697,344			0.01	\$ - \$ 697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			0.01	\$ 671,000			\$	-			\$	077,344			0.01	\$ 077,344
7 Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -			\$	-			\$	-				\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles) 9 Double Track Drill & Blast	Mile Mile	\$ 176,720,896 \$ 146,887,680			0.00	\$ -			0.00 \$	· -			\$	-				\$ - \$ -
10 Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$ -			\$	-			\$	-			0.00	
Double Track TBM (<6 Miles) Double Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 106,637,312 \$ 176,720,896															2.27	\$ 242,357,527
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$ 176,726,676				\$ -			\$	-			\$	-				\$ -
12 Crossovers	ea	\$ 442,368			0.00	\$ -			\$	-			\$ 27.6	200 204 545				\$ -
13 Cut & Cover Double Track Tunnel 14 Trench Short	Mile Mile	\$ 131,246,080 \$ 78,843,904			0.00 0.00				0.00 \$ 0.00 \$	-			2.27 \$ 0.00 \$	298,286,545			0.00	\$ - \$
15 Trench Long	Mile	\$ 57,524,224				\$ -			\$	-			\$					\$ -
Mechanical & Electrical for Tunnels Retaining Walls	Mile Mile	\$ 11,848,704 \$ 8,613,888			0.00 0.00				0.00 \$	-			2.27 \$ 0.00 \$	26,928,873			2.27 0.00	
18 Containment Walls	Mile	\$ 5,907,456			0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	
19 Single Track Cut and Cover Subway Four Track Drill & Blast	Mile Mile	\$ 131,246,080 \$ 293,775,360				\$ \$			\$	-			\$	-				\$ - \$
Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$ -			\$	-			\$	-			0.00	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624															0.00	\$ -
Four Track TBM w/3rd Tube (>6 Miles) Four Track Cut & Cover Tunnel	Mile Mile	\$ 353,441,792 \$ 262,492,160			0.00	\$ -			0.00 \$	-			0.00 \$	-			0.00	\$ -
Grade Separations																		
Grade Separations 1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -			\$	-			\$	-				\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -			\$	- 0.750 (0.5			\$	-				\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) 3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,759,680 \$ 2,029,568				\$ -			1 \$	2,759,680			\$ \$	-				\$ - \$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -			0 \$	-			0 \$	-			0	\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 3,593,216 \$ 2,850,816				\$ \$			\$	-			\$	-				\$ - \$
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -			\$	-			\$	-				\$ -
7 Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -			\$	-			\$	-				\$ -
8 Minor Crossing Closures	ea	\$ 87,040				> -			\$	-			\$	-				> -
Building Items		[

COST ELEMENTS	UNIT	UNIT PRICE		Elevated Viac	luct (HST only)		At-Grade (HST only)				Covered Trench (HST only)				Tunnel (HST only)			
Subsection 9 (a)		Base: 2009			A			Α				A			Α			
		(3rd Quarter)	Start: 2640 + 00	End: 2760 + 00	2.27	Miles	Start: 2640 + 00 End: 2760 + 00	0 2.27	Miles	Start: 2640 + 00	End: 2760 + 00	2.27	Miles	Start: 2640 + 00 End: 2760	+ 00 2.27	Miles		
		(0 1	0.1							0 1		0 1			
Subsection Dedtails Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 2640 + 00 End: 2760 + 00	Quant. 0 2.27 Miles	Cost	Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost	Start: 0 + 00 End: 0 +	Quant. 00 0.00 Miles	Cost		
Double Track Elevated (Mile)			Start: 2640 + 00		2.27 Miles		Start: 0 + 00	0.00 Miles	-	Start: 0 + 00	Liiu. 0 + 00	0.00 Miles	1	Start: 0 + 00 End: 0 +	0.00 Miles			
Double Track Tunnel (Mile)			Start: 0 + 00	21101 2700 1 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00 End: 2760				
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	1	Start: 0 + 00	0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles			
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 +				
Four Track Trench (Mile)	le i	•	Start: 0 + 00		0.00 Miles	•	Start: 0 + 00	0.00 Miles	•	Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00 End: 0 +	00 0.00 Miles	•		
1 Intermediate Passenger Stations 2 Terminal Passenger Stations	Each Each	\$ -				\$ -			\$ -				-			\$ -		
Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -		1	\$ 15,000,000				5 -			•		
Caltrain Passenger Station - On Structure	Each	\$15,000,000			0	\$ -		'	\$ 15,000,000				\$ -			\$ -		
Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			0	\$ -			\$ -			1	\$ 15,000,000			\$ -		
Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -			\$ -				\$ 15,000,000		0	\$ -		
3 Maintenance Facility	Each	\$ 123,921,884				\$ -			\$ -				\$ -			\$ -		
4 Parking - Structures	space	\$ -				\$ -			\$ -				\$ -			\$ -		
5 Parking - At Grade	space	\$ -				\$ -			\$ -				\$ -			\$ -		
											1							
Rail & Utility Relocation											1							
1 Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -			-				-			\$ -		
2 Single Track Relocation (Permanent)	Mile Mile	\$ 2,000,896				-			\$ -				-			-		
3 Single Track Removal 4 Major Utility Relocations - Dense Urban	Mile	\$ 130,048 \$ 1,548,288				\$ -			\$ -				-			\$ -		
5 Major Utility Relocations - Dense Orban	Mile	\$ 1,084,416				\$ -			\$ -				\$ -			\$ -		
6 Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -			\$ -				\$ -			\$ -		
7 Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -			\$ -				\$ -			\$ -		
8 Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -			\$ -				\$ -			\$ -		
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban	Acre	\$ 2,786,321				\$ -			\$ -				-			\$ -		
2 Urban 3 Dense Suburban	Acre	\$ 1,371,510				-			\$ -				-			-		
4 Suburban	Acre Acre	\$ 908,134 \$ 208,418				\$ -			\$ -				-			\$ -		
5 Undeveloped	Acre	\$ 3,642				\$ -			\$ -				\$ -			\$ -		
ROW required for Temp. Construction Easement	/ Ci C	Ψ 0,012				*			•				•			*		
1 Dense Urban	Acre					\$ -			\$ -				\$ -			\$ -		
2 Urban	Acre					\$ -			\$ -				\$ -			\$ -		
3 Dense Suburban	Acre					\$ -			\$ -				\$ -			\$ -		
4 Suburban	Acre					\$ -			\$ -				\$ -			\$ -		
5 Undeveloped	Acre					\$ -			\$ -				\$ -			\$ -		
Right-of-Way Required for Stations, Maintenance & Parking Facilities		A 0.70/004				A												
6 Dense Urban 7 Urban	Acre Acre	\$ 2,786,321 \$ 1,371,510				\$ -			\$ -				-					
8 Dense Suburban	Acre	\$ 908,134				\$ -			\$ -				\$ -			\$ -		
9 Suburban	Acre	\$ 208,418				\$ -			\$ -				\$ -			\$ -		
10 Undeveloped	Acre	\$ 3,642				\$ -			\$ -				\$ -			\$ -		
Environmental Mitigation = 3% Line Costs						\$ 2,736,314			\$ 681,186				\$ 11,131,300			\$ 9,006,134		
											1							
System Elements			1		_].		1		l.					
1 Signaling (ATC)	Mile	\$ 2,070,000	1		2.27			2.27			1	2.27	\$ 4,704,545		2.27	\$ 4,704,545		
2 Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			2.27			2.27	\$ 1,227,273			2.27	\$ 1,227,273		2.27	\$ 1,227,273		
3 Wayside Protection System	Mile	\$ 108,000			2.27	\$ 245,455		2.27	\$ 245,455		1	2.27	\$ 245,455		2.27	\$ 245,455		
Electrification Items											1							
1 Traction Power supply	Mile	\$ 1,170,000			2.27	\$ 2,659,091		2.27	\$ 2,659,091		1	2.27	\$ 2,659,091		2.27	\$ 2,659,091		
2 Traction Power Distribution		\$ 1,485,000			2.27			2.27			1	2.27	\$ 3,375,000		2.27	\$ 3,375,000		
	Subtotal	•				\$ 106,158,161			\$ 35,598,742				\$ 394,385,994			\$ 321,421,958		
Program Implementation Costs (per screening)						\$ 27,070,331			\$ 9,077,679		1		\$ 100,568,428			\$ 81,962,599		
Program Implementation Costs											1							
Contingencies (nor corecains) (250/)						¢ 0/ E00 E40			¢ 0.000 (05				¢ 00 E07 400			¢ 00.3EE 400		
Contingencies (per screening) (25%)						\$ 26,539,540			\$ 8,899,685				\$ 98,596,498			\$ 80,355,489		
Subtotal			1	<u>I</u>		\$ 159,768,033		1	\$ 53,576,106	 	1	<u>I</u>	¢ 502 550 021	1	1	\$ 483,740,046		
Subtotal						\$ 159,768,033			\$ 53,576,106				\$ 593,550,921			a 483,740,046		

	COST ELEMENTS	UNIT	UNIT PRICE			d Viaduct		
Subsect	ion 9 (a)		Base: 2009 (3rd Quarter)	Start: 2760 + 00	End: 2808 + 00	B 0.91	Miles	
l	De Helle		(Siù Quarter)			0		04
	on Dedtails rack At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles		Cost
	rack At-Grade (Mile)			Start: 2760 + 00	End: 2808 + 00	0.91 Miles		
	rack Tunnel (Mile)			Start: 0 + 00	211012000 1 00	0.00 Miles		
Oouble Ti	rack Trench (Mile)			Start: 0 + 00		0.00 Miles		
	ck Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		
	ck Elevated (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
	ck Tunnel (Mile)			Start: 0 + 00		0.00 Miles		
	ck Trench (Mile) le Track Section - Total	T	I	Start: 0 + 00		0.00 Miles		
	le Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$	
	le Track Section - On Structure	Mile	\$ 4,700,160			0.91		4,272,873
	le Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00		
4 Doubl	le Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	
Eour	Track Section - Total							
	track Section - At Grade	Mile	\$ 4,200,448			0.00	\$	
	Track Section - On Structure	Mile	\$ 9,400,320			0.00		
	Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$	
Four-	Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$	
<u>.</u> .	- Torolo Total							
	e Track Soction At Crado	Mile	¢ 1 E (0.212			^	¢	
	e Track Section - At Grade e Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080			0		
	e Track Section - On structure e Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0		
	e Track Section - In Trench	Mile	\$ 2,350,080			0		
	nt Double Track - At Grade	Mile	\$ 2,839,552			0		
∪Freigl	nt Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
Farth	work Items							
	Preparation - Undeveloped	Acre	\$ 9,216			7.16	\$	66,01
2 Total	·	CY	\$ 6.45			0		00,01
3 Total		CY	\$ 6.29				\$	
4 Borro		CY	\$ 12.58			0.00	\$	
5 Spoil		CY	\$ 12.58			0.00		
	scape erosion Control	Acre	\$ 6,144			0.00		
	rity Fencing (Both sides of ROW)	Mile 5% Earl	\$ 144,384			0.00		2 200
o Speci	al Drainage Facilities	o% Ear	I IWUI K				\$	3,300
Struc	tures, Tunnels, Walls							
	lard Structure	Mile	\$ 34,972,672			0.91	\$	31,793,338
	Structure	Mile	\$ 40,424,448				\$	
	Span Structure	Mile	\$ 61,919,232				\$	
	rway Crossing - Primary	Mile	\$ 85,342,208				\$	
	rway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$	
	Single Track Drill&Blast (<6 Miles) Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$	
	Single Track TBM (<6 Miles) Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 106,637,312				\$	
	le Track Drill & Blast	Mile	\$ 176,720,690			0		
	le Track Mined (Soft Soil)	Mile	\$ 79,200,000			0	\$	
Doubl	le Track TBM (<6 Miles)	Mile	\$ 106,637,312					
	le Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896					
	nic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$	
2 Cross		ea Milo	\$ 442,368			^	\$	
	Cover Double Track Tunnel th Short	Mile Mile	\$ 131,246,080 \$ 78,843,904			0		
5 Trenc		Mile	\$ 57,524,224			U	\$	
	anical & Electrical for Tunnels	Mile	\$ 11,848,704			0	\$	
	ning Walls	Mile	\$ 8,613,888			0	\$	
	ninment Walls	Mile	\$ 5,907,456			0	*	
	e Track Cut and Cover Subway	Mile	\$ 131,246,080				\$	
	Track Drill & Blast	Mile	\$ 293,775,360				\$	
	Track Mined (Soft Soil) Track TRM (26 Miles)	Mile	\$ 158,400,000 \$ 213,274,624				\$	
	Track TBM (<6 Miles) Track TBM w/3rd Tube (>6 Miles)	Mile Mile	\$ 213,274,624 \$ 353,441,792					
	Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	
	e Separations		1.				١.	
	way Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
	way Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	
	way Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) way Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,759,680 \$ 2,029,568				\$	
	way Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped) way Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea ea	\$ 2,029,568 \$ 3,563,520				\$	
	way Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,503,320				\$	
	way Crossing HSR - 2 Lane Roadway Over 4 Tracks (Juban)	ea	\$ 2,850,816				\$	
	way Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$	
	t Bridging HSR Trench	ea	\$ 1,398,784				\$	
	Crossing Clasuras	100	\$ 87,040	1			\$	
	Crossing Closures	ea	\$ 67,040				Ψ	

COST ELEMENTS	UNIT PRICE	Elevated Viaduct					
Subsection 9 (a)			Base: 2009			В	
			(3rd Quarter)	Start: 2760 + 00	End: 2808 + 00	0.91	Miles
Subsection Dedtails						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	COST
Double Track Elevated (Mile)				Start: 2760 + 00	End: 2808 + 00	0.91 Miles	
Double Track Tunnel (Mile)	Start: 0 + 00		0.00 Miles				
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile) Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles 0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00 Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
1 Intermediate Passenger Stations	Eac	:h \$	-				\$ -
Intermediate Passenger Stations (Diridon)	Eac		119,521,386			1	\$ 119,521,386
2 Terminal Passenger Stations	Eac						-
Caltrain Passenger Station - At-Grade	Eac		\$15,000,000			0	\$ -
Caltrain Passenger Station - On Structure Caltrain Passenger Station - In Tunnel or Subway	Eac Eac		\$15,000,000 \$15,000,000			0	\$ - \$ -
Caltrain Passenger Station - In Trench	Eac		\$15,000,000				\$ -
3 Maintenance Facility	Eac		123,921,884				\$ -
4 Parking - Structures	spa						\$ -
5 Parking - At Grade	spa	ce \$	-				\$ -
Doil & Utility Delegation							
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -
2 Single Track Relocation (Permanent)	Mile						\$ -
3 Single Track Removal	Mile						\$ -
4 Major Utility Relocations - Dense Urban	Mile						\$ -
5 Major Utility Relocations - Urban	Mile						\$ -
6 Major Utility Relocations - Dense Suburban	Mile						\$ -
7 Major Utility Relocations - Suburban	Mile						-
8 Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1 Dense Urban	Acre	\$	2,786,321				\$ -
2 Urban	Acre						\$ -
3 Dense Suburban	Acre						-
4 Suburban 5 Undeveloped	Acre Acre						\$ - \$ -
ROW required for Temp. Construction Easement	ACIE	; 5	3,042				-
1 Dense Urban	Acre	,					\$ -
2 Urban	Acre	,					\$ -
3 Dense Suburban	Acre						\$ -
4 Suburban	Acre						-
5 Undeveloped Right of Way Paguired for Stations Maintenance & Paguire Facilities	Acre	÷					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities 6 Dense Urban	Acre	\$	2,786,321				\$ -
7 Urban	Acre						\$ -
8 Dense Suburban	Acre	\$	908,134				\$ -
9 Suburban	Acre						\$ -
10 Undeveloped	Acre	\$	3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 4,669,707
System Elements							
1 Signaling (ATC)	Mile	\$	2,070,000			0.91	\$ 1,881,818
2 Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.91	
3 Wayside Protection System	Mile	\$	108,000				
							Φ.
Electrification Items 1 Traction Power supply	Mile	¢	1,170,000			0.91 0.91	
2 Traction Power Supply	Mile					0.91	\$ 1,350,000
E Tradical From Distribution	Subtotal	Ψ	1,100,000			0.71	\$ 165,112,978
Program Implementation Costs (per screening)							\$ 42,103,809
Program Implementation Costs							
							A 45 070 0 :=
Contingencies (per screening) (25%)							\$ 41,278,245
Subtotal				l	l	l	¢ 240 40E 022
Subtotal (Dayadad)							\$ 248,495,032

Subtotal (Rounded) \$ 248,000,000



	9(b)A (2.3 miles)	9(b)B (0.9 miles)
Subsection 9(b)	Deep Tunnel (HST Only)	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$484 (2 tracks)	\$383 (2 tracks)
Acquisition Cost of Permanent ROW	Lowest	Lowest
Notes:		HST San Jose station.

COST ELEMENTS	UNIT	UNIT PRICE		Tunnel (I	HST only)	
bsection 9(b)		Base: 2009	Start: 2640 + 00	End: 2760 + 00	4 2.27 I	Miles
		(3rd Quarter)				
bsection Dedtails uble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cost
uble Track Al-Grade (Mile)			Start: 0 + 00	Liiu. 0 + 00	0.00 Miles	
uble Track Tunnel (Mile)			Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
uble Track Trench (Mile)			Start: 0 + 00		0.00 Miles	
ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles	
ur Track Elevated (Mile)			Start: 0 + 00	F1 0 00	0.00 Miles	
ur Track Tunnel (Mile) ur Track Trench (Mile)			Start: 0 + 00 Start: 0 + 00	End: 0 + 00 End: 0 + 00	0.00 Miles 0.00 Miles	
Double Track Section - Total			Start. 0 + 00	Liiu. 0 + 00	0.00 Miles	
Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$
Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	\$
Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			2.27	
Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$
Four Track Section - Total						
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00	\$
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00	
Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0.00	\$
Four-Track Section - In Trench	Mile	\$ 9,400,320			0.00	\$
Single Track Section At Crade	Mila	¢ 1 E40 212				¢
Single Track Section - At Grade Single Track Section - On structure	Mile Mile	\$ 1,549,312 \$ 2,350,080			0	\$ \$
Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080				\$ \$
Single Track Section - In Trench	Mile	\$ 2,350,080			-	\$
Freight Double Track - At Grade	Mile	\$ 2,839,552			-	\$
Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$
Earthwork Items						
Site Preparation - Undeveloped	Acre	\$ 9,216			0.00	\$
Total Cut	CY	\$ 6.45			977777.78	
Total Fill	CY	\$ 6.29			0.00	
Borrow	CY	\$ 12.58			0.00	\$
Spoil	CY	\$ 12.58			977777.78	
Landscape erosion Control	Acre	\$ 6,144			0.00	
Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	
Special Drainage Facilities	5% Ear	inwork I				\$ 930,40
Structures, Tunnels, Walls						
Standard Structure	Mile	\$ 34,972,672			0	\$
High Structure	Mile	\$ 40,424,448				\$
Long Span Structure	Mile	\$ 61,919,232				\$
Waterway Crossing - Primary	Mile	\$ 85,342,208				\$
Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$ 697,3
Twin Single Track Drill&Blast (<6 Miles) Twin Single Track TBM (<6 Miles)	Mile Mile	\$ 142,731,264 \$ 106,637,312				\$
Twin Single Track TBM (<0 Miles) Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$ \$
Double Track Drill & Blast	Mile	\$ 146,887,680				\$
Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	\$
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			2.27	\$ 242,357,5
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				\$
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$
Crossovers Cut & Cover Double Track Tunnel	ea Mile	\$ 442,368 \$ 131,246,080				\$
Trench Short	Mile	\$ 131,246,080			0.00	\$
Trench Long	Mile	\$ 57,524,224			0.00	\$
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			2.27	\$ 26,928,8
Retaining Walls	Mile	\$ 8,613,888			0.00	\$
Containment Walls	Mile	\$ 5,907,456			0.00	
Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$
Four Track Drill & Blast Four Track Minod (Soft Soil)	Mile	\$ 293,775,360			0.00	\$ ¢
Four Track Mined (Soft Soil) Four Track TBM (<6 Miles)	Mile Mile	\$ 158,400,000 \$ 213,274,624			0.00 0.00	
Four Track TBM v/3rd Tube (>6 Miles)	Mile	\$ 353,441,792			0.00	\$
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$
Grade Separations						
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ \$
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban) Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea ea	\$ 2,759,680 \$ 2,029,568				\$ \$
Roadway Crossing HSR - 2 Lane Roadway Oridei 2 Tracks (Urideveloped) Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,029,568				\$ \$
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Giban)	ea	\$ 3,593,216				\$
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$
Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$
Street Bridging HSR Trench	ea	\$ 1,398,784				\$
Minor Crossing Closures	ea	\$ 87,040				\$

COST ELEMENTS	UNIT	UNIT PR	ICE		Tunnel (HST only)			
Subsection 9(b)		Base: 20	nno			A			
		(3rd Quai	-	Start: 2640 + 00	End: 2760 + 00	2.27	7 Mile	es .	
Subsection Dedtails			·			Quant.	1	Cost	
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		0031	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)				Start: 2640 + 00	End: 2760 + 00	2.27 Miles 0.00 Miles	-		
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles			
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile) 1 Intermediate Passenger Stations	Each	\$		Start: 0 + 00	End: 0 + 00	0.00 Miles	\$		
2 Terminal Passenger Stations	Each						\$	-	
Caltrain Passenger Station - At-Grade	Each	\$15,000	,000				\$	-	
Caltrain Passenger Station - On Structure	Each						\$	-	
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Each Each					0	\$ \$	-	
3 Maintenance Facility	Each					0	\$	-	
4 Parking - Structures	space		-				\$	-	
5 Parking - At Grade	space	\$	-				\$	-	
Pail & Utility Palacation									
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$ 2,000	,896				\$	-	
2 Single Track Relocation (Permanent)	Mile	\$ 2,000					\$	-	
3 Single Track Removal	Mile		,048				\$	-	
4 Major Utility Relocations - Dense Urban	Mile	\$ 1,548					\$	-	
5 Major Utility Relocations - Urban 6 Major Utility Relocations - Dense Suburban	Mile Mile	\$ 1,084 \$ 775	,416				\$	-	
7 Major Utility Relocations - Suburban	Mile		,896				\$	-	
8 Major Utility Relocations - Undeveloped	Mile		,720				\$	-	
ROW (Not Included) ROW required for each segment									
1 Dense Urban	Acre	\$ 2,786	321				\$	-	
2 Urban	Acre	\$ 1,371					\$	-	
3 Dense Suburban	Acre	\$ 908	,134				\$	-	
4 Suburban	Acre		,418				\$	-	
5 Undeveloped ROW required for Temp. Construction Easement	Acre	\$ 3	,642				\$	-	
1 Dense Urban	Acre						\$	-	
2 Urban	Acre						\$		
3 Dense Suburban	Acre						\$	-	
4 Suburban	Acre						\$	-	
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Facilities	Acre						Þ	-	
6 Dense Urban	Acre	\$ 2,786	,321				\$	-	
7 Urban	Acre	\$ 1,371					\$	-	
8 Dense Suburban	Acre		,134				\$	-	
9 Suburban 10 Undeveloped	Acre Acre		,418 ,642				\$	-	
Environmental Mitigation = 3% Line Costs	Acre		,042				\$	9,006,134	
								* **	
System Elements		A 0.070	000			0.07	_	4704575	
1 Signaling (ATC) 2 Communications (w/ Fiber Optic Backbone)	Mile Mile	\$ 2,070 \$ 540	,000,			2.27 2.27		4,704,545 1,227,273	
3 Wayside Protection System	Mile		,000			2.27		245,455	
Electrification Items		A 4 4 7 2	000			0.07	_	0 /50 001	
1 Traction Power supply 2 Traction Power Distribution	Mile Mile	\$ 1,170 \$ 1,485				2.27 2.27		2,659,091 3,375,000	
2 ITAGROTT OWG DISHIDURION	Subtotal	φ 1,400	,000			2.21	\$	321,421,958	
Program Implementation Costs (per screening)							\$	81,962,599	
Program Implementation Costs									
Contingencies (per screening) (25%)							\$	80,355,489	
Sommigencies (per screening) (2070)							Φ	00,333,409	
Subtotal							\$	483,740,046	
C LLLL (D L. I)							٠.	10.1.000.000	

Subtotal (Rounded) \$ 484,000,000



COST ELEMENTS	UNIT	UNIT PRICE			HST only)		
bsection 9(b)		Base: 2009	Start: 2760 + 00	End: 2809 + 00	0.93	Miles	
		(3rd Quarter)					
bsection Dedtails uble Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	Quant. 0.00 Miles	Cos	<u>st</u>
uble Track Elevated (Mile)			Start: 0 + 00	Liid. 0 1 00	0.00 Miles		
uble Track Tunnel (Mile)			Start: 2760 + 00	End: 2809 + 00	0.93 Miles		
uble Track Trench (Mile)			Start: 0 + 00		0.00 Miles		
ur Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00		0.00 Miles		
ur Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		
ur Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
ur Track Trench (Mile) Double Track Section - Total			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$	
Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	•	
Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.93	\$ 4,3	361,8
Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$	
Four Track Section - Total							
Four-track Section - At Grade	Mile	\$ 4,200,448			0.00		
Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00		
Four-Track Section - In Tunnel or Subway	Mile Mile	\$ 9,400,320 \$ 9,400,320			0.00 0.00		
Four-Track Section - In Trench	iville	\$ 9,400,320			0.00	Þ	
Single Track - Total							
Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$	
Single Track Section - On structure	Mile	\$ 2,350,080			Ö	\$	
7 Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$	
Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$	
Freight Double Track - At Grade	Mile	\$ 2,839,552				\$	
Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$	
Earthwork Items							
Site Preparation - Undeveloped	Acre	\$ 9,216			0.00	\$	
2 Total Cut	CY	\$ 6.45			399259.26		575,7
Total Fill	CY	\$ 6.29			0.00		313,1
Borrow	CY	\$ 12.58			0.00		
Spoil	CY	\$ 12.58			399259.26		022,6
Landscape erosion Control	Acre	\$ 6,144			0.00		
Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.00	\$	
Special Drainage Facilities	5% Ear	thwork				\$ 3	379,9
Structures, Tunnels, Walls		A 04.070.770				•	
Standard Structure	Mile	\$ 34,972,672			0	\$	
High Structure Long Span Structure	Mile	\$ 40,424,448				\$	
Waterway Crossing - Primary	Mile Mile	\$ 61,919,232 \$ 85,342,208				\$	
Waterway Crossing - Primary Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408			0.01	\$ 6	697,3
Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264			0.01	\$	J71,3
Twin Single Track Bhildblast (<0 Miles)	Mile	\$ 106,637,312				\$	
Twin Single Track TBM v/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$	
Double Track Drill & Blast	Mile	\$ 146,887,680				\$	
Double Track Mined (Soft Soil)	Mile	\$ 79,200,000			0.00	\$	
Double Track TBM (<6 Miles)	Mile	\$ 106,637,312			0.93		962,6
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896			- 1	\$	
Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$	
Crossovers	ea	\$ 442,368				\$	
Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080				\$	
Trench Short	Mile	\$ 78,843,904			0.00	\$	
Trench Long	Mile	\$ 57,524,224			2	\$	
Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			0.93		995,9
Retaining Walls	Mile	\$ 8,613,888			0.00		
Containment Walls	Mile Mile	\$ 5,907,456			0.00	Ф ¢	
Single Track Cut and Cover Subway Four Track Drill & Blast	Mile	\$ 131,246,080 \$ 293,775,360				\$	
Four Track Mined (Soft Soil)	Mile	\$ 293,775,360				\$	
Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				\$	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792				\$	
Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$	
Grade Separations							
Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$	
Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$	
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$	
Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$	
Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816 \$ 3,171,328				\$ \$	
Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped) Street Bridging HSR Trench	ea ea	\$ 3,171,328 \$ 1,398,784				\$	
Minor Crossing Closures	ea	\$ 1,398,784 \$ 87,040				\$	
Anvinior Grossing Glosures	ca	ψ 07,040				Ψ	

COST ELEMENTS	INIT PRICE		Tunnel ((HST only)					
Subsection 9(b)	UNI		Base: 2009			В			
			rd Quarter)	Start: 2760 + 00	End: 2809 + 00	0.93	Mile	S	
Subsection Dedtails		`	•			Quant.	1	Cost	
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		CUSI	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)				Start: 2760 + 00	End: 2809 + 00	0.93 Miles			
Double Track Trench (Mile) Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00 Start: 0 + 00		0.00 Miles 0.00 Miles			
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)	1-			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Intermediate Passenger Stations Intermediate Passenger Stations (Diridon)	Eac Eac		119,521,386			1	\$	119,521,386	
2 Terminal Passenger Stations	Eac		117,321,300			'	\$	117,321,300	
Caltrain Passenger Station - At-Grade	Eac		\$15,000,000				\$	-	
Caltrain Passenger Station - On Structure	Eac		\$15,000,000				\$	-	
Caltrain Passenger Station - In Tunnel or Subway Caltrain Passenger Station - In Trench	Eac Eac		\$15,000,000 \$15,000,000			0	\$	-	
3 Maintenance Facility	Eac		123,921,884			0	\$	-	
4 Parking - Structures	space		-				\$	-	
5 Parking - At Grade	spac		-				\$	-	
Della Halling Delegation									
Rail & Utility Relocation 1 Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$		
2 Single Track Relocation (Permanent)	Mile		2,000,896				\$	-	
3 Single Track Removal	Mile		130,048				\$	-	
4 Major Utility Relocations - Dense Urban	Mile		1,548,288				\$	-	
5 Major Utility Relocations - Urban	Mile		1,084,416				\$	-	
6 Major Utility Relocations - Dense Suburban 7 Major Utility Relocations - Suburban	Mile Mile		775,168 464,896				\$	-	
8 Major Utility Relocations - Undeveloped	Mile		30,720				\$	-	
		1					Ť		
ROW (Not Included)									
ROW required for each segment 1 Dense Urban	Aoro		2 707 221				\$		
2 Urban	Acre Acre		2,786,321 1,371,510				\$	-	
3 Dense Suburban	Acre		908,134				\$		
4 Suburban	Acre		208,418				\$	-	
5 Undeveloped	Acre	\$	3,642				\$	-	
ROW required for Temp. Construction Easement 1 Dense Urban	Acre	,					¢		
2 Urban	Acre						\$	-	
3 Dense Suburban	Acre	;					\$		
4 Suburban	Acre						\$	-	
5 Undeveloped Right-of-Way Required for Stations, Maintenance & Parking Faci	Acre	;					\$		
6 Dense Urban	Acre	\$	2,786,321				\$	-	
7 Urban	Acre	\$	1,371,510				\$	-	
8 Dense Suburban	Acre		908,134				\$	-	
9 Suburban	Acre		208,418				\$		
10 Undeveloped Environmental Mitigation = 3% Line Costs	Acre	\$	3,642				\$	7,275,524	
							*	. 12101024	
System Elements							١.		
1 Signaling (ATC)	Mile		2,070,000			0.93		1,921,023	
2 Communications (w/ Fiber Optic Backbone) 3 Wayside Protection System	Mile Mile		540,000 108,000			0.93 0.93		501,136 100,227	
Sirrayside Frotection System	Mile	Ψ	100,000			0.93	Ψ	100,227	
Electrification Items									
1 Traction Power supply	Mile		1,170,000			0.93		1,085,795	
2 Traction Power Distribution	Mile Subtotal	\$	1,485,000			0.93	\$	1,378,125 254,779,300	
Program Implementation Costs (per screening)	Subitital						\$	64,968,722	
Program Implementation Costs									
							١.		
Contingencies (per screening) (25%)							\$	63,694,825	
Subtotal				1	<u> </u>	<u> </u>	¢	202 ///2 0//7	
อนมเปเสี							\$	383,442,847	

Subtotal (Rounded) \$ 383,000,000

